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SAFETY OF GENERAL AVIATION

HEARING

BEFORE THE

SUBCOMMITTEE ON AVIATION

OF THE

COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION UNITED STATES SENATE

ONE HUNDREDTH CONGRESS

SECOND SESSION

ON

SAFETY OF GENERAL AVIATION BY RESTRICTING AIR TRAFFIC
AROUND CERTAIN MAJOR AIRPORTS

JANUARY 29, 1988

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SAFETY OF GENERAL AVIATION

FRIDAY, JANUARY 29, 1988

U.S. Senate,
Subcommittee on Aviation,
Committee on Commerce, Science, and Transportation,
Phoenix, AZ.

The subcommittee met at 9 a.m. in the Arizona Air National Guard Auditorium, at the 161st Air Refueling Group, Hon. Wendell Ford (chairman of the subcommittee) presiding.

Staff members assigned to this hearing: Steve Palmer, professional staff member; and Patty Hahn, minority staff counsel.

OPENING STATEMENT BY SENATOR FORD

Senator Ford. Good morning, ladies and gentlemen. Could I have your attention, please? I'm Senator Wendell Ford from the great Commonwealth of Kentucky.

I'm very pleased to be here in Arizona. It was gorgeous this morning to get up and look out and see the mountains and enjoy flat land. I'm not a flat lander. The closest thing to flat land we have is rolling ground, and then we have peanuts at one end and coal at the other end of our state. So it's really good for me personally to be out here today. And I think it's good for us in Washington to get away from the beltway, to come to here and listen to people, and have an opportunity to let you have your input in the decisions we're making.

I'm very pleased this morning to have two excellent Senators with me. I have known Dennis DeConcini for a long, long time. We've been friends more years than we want to admit. I've worked with Dennis—I believe you call it CAP; the Central Arizona Project for water—for a long time. He does a good job on the Appropriations Committee for highway money for Scottsdale. He works on me pretty good. And we're always delighted to try to help.

And John McCain I have only known now a short year, but since he came to the U.S. Senate, we serve on the Commerce Committee together and have a good association. John's a very hard worker. He's already passed legislation out of the Committee through the Senate that originated in the Commerce Committee, originated in the Aviation Subcommittee. And it indicates to me that in the future, John will authorize a project, and then Dennis will fund it. You've got a hell of a team out here in Arizona.

It's relatively rare that a congressional subcommittee leaves Washington, DC. More often than not, we're forced to remain inside the beltway, listening to highly paid professional witnesses who appear time and time again on the many issues that come before us; and we can almost tell you how much they were paid for the appearance and what they're going to say. As Chairman of the Senate Aviation Subcommittee, I believe that there are certain matters which require you to leave that setting behind, seeking out those who will be directly affected by Washington's actions.

The matter at hand—increasing restrictions on general aviation operations at major airports like Phoenix—is one that needs much consideration. During the past year, the Federal Aviation Administration has taken a number of steps to extend restrictions over general aviation flights. First, there was a proposal to expand and make uniform the so-called terminal control areas, TCA's, where general aviation flights are subject to operating and minimum equipment requirements. Then, last August, the FAA took the additional step of closing the VFR flight corridor for the private aircraft transiting the busy area of Los Angeles basin.

But more importantly, I think, to most of you here today is the plan to extend the FAA's Terminal Control Area to Phoenix Sky Harbor International Airport. This proposal, which was announced last year by former Transportation Secretary Dole, would have a significant effect on how the general aviation industry operates in your state. Before action on that proposal is completed by the FAA, I felt it was necessary to bring the Subcommittee to Phoenix to hear from the people of Arizona and to listen to your comments with these two distinguished colleagues of mine.

Let me make clear at the outset that we're not here to choose sides on this issue, saying that airspace restrictions are good or bad. Safety, as always, is our number one concern. But it is our intention to ensure that all viewpoints are given full consideration. This will also help educate us and better equip the Subcommittee to deal with such matters in the future.

Let me yield now to my colleagues for any opening statements they might have. I want to express my appreciation to both of them for the site this morning; it's very significant. And as we look out here, they want to run me over to the airport so I can catch my flight out here. They're going to take me right across the runway. And that indicated to me, when I came in, that you had so many injures with an M-16 with a clip inserted, and I don't know whether I want to go back that way or across that way, but I'll certainly get out of here as soon as I can.

Without further ado, I want to call on Senator McCain, who is a member of the Commerce Committee and a member of the Senate Aviation Subcommittee and hear a few words from him this morning, and then I'll call on your senior Senator, Dennis DeConcini.

John.

OPENING STATEMENT BY SENATOR McCAIN

Senator McCain. Thank you, Mr. Chairman. I know I speak for many people here in our state who are concerned about aviation issues and particularly about the topic of the hearing this morning. We're deeply appreciative that you would take the time from an extremely busy schedule to be here. I'm sure that many here do not know that you're the Chairman of the very important Rules Committee, and there are localities and cities throughout the country that have also asked for you to have hearings in those places, and we're grateful that you would take the time from your very busy schedule to hold this hearing out here.

And, believe me, we're talking about an issue of incredible importance to the future economic development of our state and our Valley. I think you can see, from the participation we have here today, the enormous importance that people, that our citizens, place on this hearing. I appreciate having the opportunity for us to address what has become one of the most important issues facing our nation, the issue of aviation safety.

Since deregulation, the growth in air traffic has been dramatic. Reported near misses have been rising. The mid-air collision over Cerritos, California, in August of 1986 between a DC–9 and a small private airplane highlighted the need for a re-examination of our busiest airports. A series of similar collisions in the 1960's resulted in the development of TCA's or terminal control areas.

Terminal control areas are intended to minimize the chances of collision between commercial and civil aircraft by requiring a stricter control of the air space around a major terminal. They have been remarkably effective. When you look at the steady decline in aircraft accidents around major population and major air-traffic areas, the Cerritos collision is the only one to have taken place within a TCA since their inception. As you know, TCA's are currently in place at 23 of our busiest airports. Each TCA is designed to accommodate the particular conditions found at each of the designated airports.

The FAA, in the wake of the Cerritos accident, has proposed to standardize the size and shape of TCA's, which I think is going to be a major topic, particularly as far as Phoenix is concerned, in our testimony today. The FAA has indicated an interest in expanding the TCA system by an additional nine airports. Sky Harbor would be among those nine. I hope these hearings will examine both the benefits and drawbacks of these proposals.

Sky Harbor in Phoenix is one of the busiest air-traffic areas in the world, with more than 2.5 million landings and take-offs occurring annually within a 25-mile radius of Sky Harbor. It's the busiest airport in the country without a TCA. Approximately 30 percent of the air traffic at Sky Harbor is general-aviation operations, the majority in support of local business. In 1984 this type of business travel translated into $63 million for the State of Arizona. Recreational aviation brought in another $23 million. As these figures indicate, general aviation is an integral part of the Valley's and the state's economy.

The implementation of a TCA around a major airport is intended to make flying safer for both civil and commercial aircraft. However, in reality, the higher level of technical requirements and flight restrictions within TCA's discourages or limits their use by general aviation. Although limitations may be appropriate, I think it's important to remember that, traditionally, Sky Harbor has been viewed as a downtown airport rather than a major air-carrier terminal. While this perception may no longer be accurate, I don't believe we should be effectively excluding any group from the use of a public facility. The rights of all classes of air-space users must be carefully weighed as we seek to optimize aviation safety.

I'd just like to remind the members of the panel and other members of the Committee that around Sky Harbor Airport we have Glendale, Falcon Field, Goodyear, Deer Valley, Scottsdale, and Chandler that are home for over 50 percent of all the general-aviation aircraft in Arizona, and they are responsible for over 80 percent more than the traffic at Sky Harbor. I say this because if we impose a TCA we will be affecting all of those airports that I described.

So, as a frequent flyer and as a former pilot, I'm confident that we can achieve a proper balance among these considerations. And recognizing, as the Chairman has said time after time—and I would suggest that Senator Ford is as responsible for aviation safety as any man in America and has contributed more—that safety is paramount. As we get into the discussions we will hold today, there are some very deep-seated and strongly held views by witnesses we will hear from. Let's remember always that safety is paramount. We recognize that that's the goal of the Federal Aviation Agency and the other governmental witnesses that we will hear from this morning.

Mr. Chairman, I apologize for the length of my statement. I know we are discussing an issue that's very important to our Valley and state here, and, again, I'd like to express my deep appreciation for your taking the time to be here. Thank you, Mr. Chairman.

Senator FORD. John, you're mighty nice to make those kind remarks. If we do run out of time or I run out of time because of your lengthy statement, you can stay here and take care of it for me.

Now, your senior colleague from Arizona, Senator DeConcini.

STATEMENT OF HON. DENNIS DeCONCINI, U.S. SENATOR FROM ARIZONA

Senator DECONCINI. Chairman Ford, thank you very much, and Senator McCain, for letting me be part of your hearing today. I'm not a member of the Commerce Committee but appreciate this opportunity to participate in this important hearing with Senator Ford and Senator McCain. I want to thank the Arizona Air National Guard, General Owens, and his fine staff for making the arrangements here.

And thank you, Senator McCain, for the splendid cooperation on these issues that affect Arizona. He is a leader in his first year in the Senate. And, as Senator Ford says, God bless him. He's done a lot for Arizona. So I particularly thank him for taking time to be here today. Yesterday, when he left Washington, we didn't know if they were going to have votes on the Senate floor today or not; we found out, about 7:00 o'clock last night, there wouldn't be. But he was coming anyway. He said, "This is important; I've made a commitment to Senator Ford and you, and I'll be there."

When we talk of any aviation-related issue, safety must always be the number-one concern. As my colleague has said, we cannot put that aside, even for personal pleasures or joy. But there are ways to, I think, have it both ways, particularly with the professionals and the technology we have today. Along with much of the

American public, I forget about the complexities and dangers of air travel and give no more thought to an airline flight than I do to getting into my car, except sometimes when I drive around Washington, DC., I have a more than little fear. But, generally speaking, I take it for granted, as I think most of the public does.

Last year a series of air disasters reminded us of that danger. They reminded us that aviation is a science and that it is unforgiving of errors and carelessness. They reminded us how fragile our security systems for commercial flying are and that constant vigilance and oversight must be the rule. While I'm not a pilot, I do have a good friend, Bob Kohn, who is here today, who is an outstanding pilot, who has given me a lot of insight on problems and concerns in aviation in Arizona.

With regard to security, let me congratulate the FAA on its swift response to the disaster on the California PSA flight. In hindsight, we all wish that these new improved security precautions had been in place prior to the December 7th accident, but the FAA is to be commended for its expeditious action once this disaster occurred. I hope that the Department of Transportation is continuing to search for ways to improve airport security. Though I know these hearings are not on this subject matter, it is one of great concern that I hear from people in Arizona.

Many in today's audience and on today's panels are pilots; you have a keen appreciation for the risk and the joys of flying. My desire for our air-traffic control system is that it be as safe as humanly possible without so overregulating it that there is no joy left in the system. Safety must always be number one. And I believe we can ensure safe skies while making certain that all users get adequate access to the nation's skies.

Finally, let me express my appreciation, and I'm sure the appreciation of all who use the nation's airways, to the air-traffic controllers. Surely this is one of the most pressure-filled jobs in our society today. Too often the flying public only thinks about the air-traffic controllers when something goes wrong and there's a disaster. Let me take this opportunity to thank those harried men and women who are hassled and do really an outstanding job for us.

And, again, Chairman Ford, I thank you for being here today. And I hope you will join me in taking my coat off because it's a good, warm Arizona day.

Senator **Ford**. Boy, I tell you, you just won accolades from me. I tell you, it's beginning to trickle a little bit from me. You know, coming from Kentucky, you got to get the meanness out of you; it comes from heat. It's been between 5 and 10 in Kentucky, and you come out here and it was 81 yesterday, and it's easy to take but hard to adjust to.

I'm going to make one more point, and then we'll get to our hearings. On our left over here, you see five young people that do an excellent job, each one. The first four represent the members of the Senators on the Aviation Subcommittee. Steve Palmer is the last one down there, and he is here representing the Committee. There may be some others that are not up there. But we have a great deal to do, and we're very fortunate to have an excellent staff. Not only do they get along together, they give excellent results. And so one of the things we feel—I think my colleagues will admit—is that as long as we have fine people to work with like them, then we are going to produce a better product. So I'm very proud of them and very pleased to work with them. And I wanted to acknowledge their presence here today.

We'll start with our first panel of the day. The first witness is Norbert A. Owens, Deputy Associate Administrator for Air Traffic, Federal Aviation Administration. We also have Richard W. Miller, Manager, Phoenix TRACON, FAA, Phoenix Sky Harbor. Also from the FAA, we have Mr. Ron Debelak, from the Western-Pacific region. Finally, we have Larry W. Bowers, National Air Traffic Controllers Association.

So let's start out with Mr. Owens and let you get that; and we'll go Nobbie, Ron, Dick, and Larry. How's that?

STATEMENT OF NORBERT A. OWENS, DEPUTY ASSOCIATE ADMINISTRATOR FOR AIR TRAFFIC, FEDERAL AVIATION ADMINISTRATION

Mr. OWENS. Thank you. Mr. Chairman, members of the Subcommittee, I welcome the opportunity to appear here before the Subcommittee today to describe the FAA's terminal control area, known as the TCA program. As you mentioned, with me today are Ron Debelak, specialist in the air space and procedures branch in our Western Pacific regional office, and Richard Miller, manager of the Phoenix TRACON.

The primary purpose of the FAA's air-traffic control system is to separate air traffic. The TCA program was developed to reduce the mid-air collision potential in the congested air space surrounding an airport with high-density air traffic by providing an area in which all aircraft are subject to certain operating rules and equipment requirements. The TCA operating rules provide a level of protection that is appropriate for the large numbers of aircraft and people served by this type of airport. The TCA equipment requirements provide the air-traffic control system with an increased capability to provide aircraft-separation service within the TCA. The criteria for considering a given terminal area as a TCA candidate is based on factors which include the number of aircraft and people using that air space, the traffic density, and the type or nature of operations being conducted.

Today I would like to highlight for you the steps we have taken regarding terminal control areas and then to touch on the status of our efforts to propose the establishment of a TCA here in Phoenix. A TCA is an air-space configuration surrounding an airport which provides a high degree of protection to aircraft landing at or departing from that airport by requiring all aircraft operating within the TCA to carry specified equipment, such as altitude-encoding transponders, and to obtain approval to enter the TCA air space. Within the TCA, all aircraft—whether operating under instrument flight rules, IFR, or visual flight rules, VFR—must follow the directions of air-traffic controllers. They must also remain in continuing contact with the control facility so that our controllers are aware of all aircraft operating within the TCA.

TCA's are generally circular in shape and have an inverted stairstep configuration of three or more levels. This enables general-aviation aircraft to fly underneath the TCA air space to reach small airports in the general vicinity of the primary TCA airport. A TCA extends from ground level up to as high as 12,500 feet. Each succeeding level of a TCA extends further out from the airport to provide aircraft landing or taking off from the primary airport with TCA protection until they reach the higher altitudes where generally fewer VFR aircraft operate.

TCA's were first implemented in the early 1970's and proved highly effective in reducing the potential for mid-air collisions involving air-carrier aircraft. Experience since then clearly demonstrates that our 23 current TCA's have provided a significant measure of protection to the traveling public and have contributed substantially to an improved safety record in the congested air space around our busiest airports. Let me cite one recent example.

This last summer, Administrator McArtor, noting the dramatic increase in reported near mid-air collisions, known as NMAC's, over the Los Angeles area, took emergency action to reduce the threat by further limiting access to the Los Angeles TCA. The results speak for themselves. Air-carrier NMAC's within the TCA air space dropped from 11 in the 100 days prior to the emergency rule change to 4 in the 100 days following that action. The efforts to minimize the threat to air carriers proved successful.

TCA's are a key air-space management tool available to the FAA when traffic conditions warrant their implementation. We do recognize, however, that the implementation of a TCA imposes additional requirements on air-space users and may add some degree of inconvenience to itinerant aircraft who may be denied clearance to transit a TCA during peak traffic periods. Therefore, it has been the FAA's practice to implement new TCA's only where justified by passenger enplanements and traffic conditions and with an opportunity for public participation in a rule-making process. And we also seek, consistent with safety, to facilitate general-aviation operations in the vicinity of the primary airport which led to the establishment of the TCA.

In 1986 the FAA took an extensive look at TCA operations with a view toward making changes that would enhance their effectiveness. Out of that effort, there were a number of recommendations which were adopted by the FAA. Key recommendations included steps to simplify the design of TCA's and to improve their depiction on aeronautical charts. Additional recommendations included measures to step up enforcement of TCA violations, enhance pilot training and understanding of TCA requirements, establish one class of TCA's instead of two for simplification, and to expand Mode C transponder requirements in the vicinity of a TCA. We have made substantial progress in these efforts, although much more still remains to be done.

The FAA is currently working to initiate a rule-making effort to establish a TCA here in Phoenix. As far back as 1980, Phoenix was under consideration for a TCA. And, in fact, a notice of proposed rule-making, known as an NPRM, was issued, proposing the establishment of a TCA. With the advent of the controllers' strike in 1981, the FAA established a moratorium on additional TCA's. The Phoenix TCA proposal was withdrawn in 1985, and an airport radar service area was established here.

Recently the FAA has again identified Phoenix as one of nine additional candidates for the establishment of a TCA. In order to qualify as a TCA, an airport must have 3,500,000 annual enplaned passengers or 300,000 annual airport operations at the TCA primary airport, of which 50 percent of those must be air-carrier operations. In 1986 Phoenix enplaned 7.8 million passengers and had 417,900 operations, of which 289,956 were air carriers. As you can see, Phoenix is a strong candidate for the establishment of a TCA based on either criterion.

In keeping with the established practice, we will propose the establishment of the Phoenix TCA as an NPRM. Moreover, we will be holding a public hearing in the form of an informal air-space meeting here in Phoenix to receive input from interested persons—and then will carefully evaluate all comments received in response to our proposal both at the public hearing and in our rule-making docket before finalizing a TCA at Phoenix.

One factor, for example, associated with establishing a TCA here in Phoenix is the impact of the military operations and facilities and the number of general-aviations facilities in proximity to the primary airport. I know that the users of these airports are concerned with the impact that a potential TCA may have on their use of the air space, and I understand the nature of that concern. From our perspective, as I noted earlier, we seek to facilitate the use of the air space outside of a TCA by general aviation while providing for the safety of those aircraft operating within the TCA.

Consistent with the need to provide a high degree of safety to aircraft operating within the TCA, we will be carefully considering measures that may ease the potential burden on individuals who operate into or out of the general-aviation airports near the primary airport. We are awaiting the receipt of a final staff study from our Western Pacific region before issuing an NPRM concerning the Phoenix TCA. We have asked them to ensure that options concerning general aviation's use of the air space in the vicinity of the TCA are fully considered. We expect that our NPRM, when issued, will propose some means of accommodating the special airspace situation in Phoenix resulting from the high number of general-aviation airports in the vicinity of the primary airport. Again, when the NPRM is issued, we will studiously evaluate all comments received in response to the proposal.

In closing, Mr. Chairman, I would note that our TCA program has been, in fact, highly successful in helping to reduce the potential threat of mid-air collisions. It is, of course, only one means of improving safety. We must continue to reduce near mid-air collisions though—through all means available to us, including increased pilot vigilance and education and introduction of the TCAS system. You may be assured that we in the FAA are doing all that we can to improve the safety of the skies and that we sincerely appreciate the support of this Subcommittee in helping us to do that.

That completes my prepared statement, Mr. Chairman. I believe Mr. Bowers has a statement, and then we would be pleased to respond to any questions you may have.

Senator **Ford**. Fine. Thank you very much.

Mr. Bowers.

STATEMENT OF LARRY W. BOWERS, NATIONAL AIR TRAFFIC CONTROLLERS ASSOCIATION

Mr. Bowers. Thank you, Mr. Chairman. On behalf of the union, we thank you for the opportunity to speak to you today on this issue.

The union supports, in principle, the proposal to establish a terminal control area over Sky Harbor International Airport. The foremost reason is to further enhance the safety factor within the Phoenix terminal air space. It is felt that a terminal control area or TCA would maintain integrity of the system by providing equipment standards for all the aircraft that would operate within a proposed air space.

A point of difference is the actual dimensions of the TCA air space that is being proposed. It is our opinion that any change in the system—be it regulatory, procedural, or one of equipment—should be a step to improve the system while upholding the posture of not being overly restrictive. Although the work force at Phoenix does favor implementation of a TCA, we feel that the proposed TCA air space of 30 miles in diameter with a ceiling of 12,500 feet MSL, mean sea level, lies outside the area of concentrated air traffic that is around the major airport. In addition, we feel this would be too restrictive for the general-aviation user.

For example, there are some that would argue that the TCA would increase controller workload. We disagree with that point of view. It is has been observed that since the ARSA air space went into effect, a majority of the general-aviation aircraft have elected to receive ARSA services. The TCA would only add those few who presently choose to dart over and around the ARSA. The addition of the aircraft would not be a significant increase in controller workload.

In closing, Mr. Chairman, the controller work force favors establishing a terminal control area at Phoenix. We would welcome the opportunity to provide operational input on the proposed TCA, to continue the best system service to all users today as well as the projected traffic of the next decade. Thank you.

Senator Ford. Fine. Thank you very much, Mr. Bowers. In answering the question—I say that to all the other witnesses—rather than using the acronyms that may be familiar in Washington or in the aviation community itself, let's go ahead and say what it might be, the whole thing rather than saying for example, TCA, or whatever it might be. So let's do that.

I'm going to let Senator McCain start the questioning of Mr. Owens and his experts and Mr. Bowers. John?

Senator McCain. Thank you, Mr. Chairman.

And thank you. I'd like to thank the witnesses for their testimony. I also think it might be nice to tell these witnesses that there are many of us who understand the fine work that they have done which is reflected in the actual statistics showing that last year was the safest year in aviation history, and the year before that was the next safest. That improvement has been accomplished dispite a dramatic increase in air traffic across this country, and it's due to the efforts of people like yourself. And so we appreciate very much what you have done.

Mr. Owens, it seems clear that—let's try and lay it out as well as we can for people here in Arizona. It seems clear that very serious consideration is being given to creation of a TCA at Sky Harbor Airport; would you disagree with that?

Mr. OWENS. No. That is correct.

Senator MCCAIN. Our job is to get all the information, all of the input from the people who would be affected by such a move, so that you can make the best decision, not only as to whether a TCA should be in place, but under what circumstances; is that also an accurate statement?

Mr. OWENS. Yes, it is.

Senator MCCAIN. Of course, one of the biggest concerns to the witnesses here is how significantly that TCA will not only affect commercial airliners but also general aviation. I mentioned to you in my opening statement the enormous amount of general aviation we have within 25 miles of the Sky Harbor Airport. And as you also know, Sky Harbor, as opposed to many major hubs, encourages general aviation. Unlike many national airports that I fly into all the time, you have to be an Air Force One or Two in order to——

Senator FORD. They deliver those.

Senator MCCAIN. That is a way of life that we have out here in the West. And I'm sure you appreciate that.

What concerns many of us is whether this TCA must be in the same standardized form and shape as the type that you described in your statement. At the same time, take into consideration, as you also mentioned in your statement, for example, that "One factor associated with establishing a TCA here in Phoenix is the impact of the military operations and facilities and the number of general-aviation facilities in proximity to the primary airport." You then go on to say, "We will be carefully considering measures that may ease the potential burden on individuals who operate into or out of the general-aviation airports near the primary airport."

So I guess my concern is twofold: What accommodations could be made to ensure that we can continue to have the kind of military operations now conducted from Luke and Williams Air Force Base; and what accommodations could be made for the incredibly large general-aviation activity in and out of the 25-mile area?

Mr. OWENS. The general guidance that was issued from Washington concerning the development of TCA's actually came out of a group of users including AOPA, NBAA, ATA, that felt that there needed to be a greater degree of standardization as far as TCA's in the country were concerned, to simplify the identification of those TCA's for the general-aviation pilot and the air-carrier pilot. We realize that each metropolitan area, each terminal, or each airport is different and needs special accommodations to make the TCA work efficiently. I think that in the process that we have where—here local people here at Phoenix and the western regional office develop what we'd call—I'd call a straw man, a proposal to provide TCA service, terminal control area service, here at Phoenix. And then it is, in fact, open to the public to comment on that and to—to develop or—or recommend variations on that initial proposal. Those steps are yet to come and, in fact, they will come.

And, Dick, if you have anything more you want to say on that.

STATEMENT OF RICHARD W. MILLER, MANAGER, PHOENIX TRACON, FEDERAL AVIATION ADMINISTRATION

Mr. MILLER. The process that will be used locally and we initially looked at, the guidance that we received from Washington with the generic 30-mile TCA, the process that will be used will be the same that was adopted for the airport radar service area that we implemented in June of 1986. The users, local users here in this room, will recall that, after their inputs were received, the airport radar service area was modified; the local inputs were adopted. And I think we were better off because of that. And I envision the same thing happening in this particular process.

Senator McCAIN. Well, good. You know the politician's prayer, I think Congressman Udall said, is that the words that I utter today may be tender and sweet because tomorrow that's what I may have to eat.

And in 1981, the FAA western region officials stated, and I quote, "To design a safe and efficient positive-control environment in a terminal area, it's necessary to tailor the air-space configuration to the specific needs of that area, the various types of needs, cooperate within the system, and the basic requirements of all airports within the terminal area must be considered along with the restraints."

Mr. OWENS. We still feel that way, yes, sir.

Senator McCAIN. Do you interpret that statement as holding out the possibility for departure or arrival corridors in a TCA?

Mr. OWENS. I think it holds a possibility of—for the establishment of what we would call VFR transition routes through the TCA to accommodate easy access into and through the TCA. The prospect of—of corridors has—has come up many, many times in the past as far as TCA's are concerned, the proposal being that the commercial traffic be assigned special tunnels, if you will, or corridors to the—to the primary TCA airport. The difficulty with that is that as traffic increases as it has here in Phoenix, as you get closer to the airport, there is an absolute requirement for the air-traffic controller to have a maximum amount of flexibility in which to maneuver, position aircraft for landing or immediately after takeoff in order to conduct an efficient air-traffic operation. We have not found that, at any location yet, to be a reasonable way in which to build terminal control area air space. I'm not closing the door on that entirely because somewhere out there there may be an airport that could do that, but I have not seen it yet.

Senator McCAIN. Do you agree with that, Mr. Bowers?

Mr. BOWERS. Well, sir, from my personal experience, prior to working at Phoenix, I worked at Denver, which is currently a Group 2 TCA, and there were corridors available. But because of the terrain in and around Denver, there was not that much general aviation at higher altitudes. And that's my only experience. I think that to really get a definitive answer you would have to look at the geographic location of the proposed TCA to find out if a corridor is a realistic possibility for VFR air traffic.

Senator McCAIN. Finally, Mr. Bowers, if we put up a TCA at Sky Harbor Airport, do we have a sufficient number of controllers here, in your view?

Mr. BOWERS. Presently on staff, I think it would depend on the way the positions and the air space would resectorize depending on the TCA. To answer—and there's no way I can answer that honestly, depending on, we may create two or three more positions by implementing a TCA. If that's the case, then we would be needing more controllers; if not, then there are sufficient controllers presently to take care of the traffic number and volume.

Senator MCCAIN. I know you have some difficult decisions to arrive at, Mr. Owens, and I hope that you will seize this opportunity to assure the interested people in the State of Arizona that you will listen very carefully to their input at the upcoming public hearing that you will be holding. I'm sure you will take their views into serious consideration as you formulate this TCA.

Mr. OWENS. Indeed, we will.

Senator MCCAIN. Thank you, Mr. Chairman.

Senator FORD. Senator DeConcini?

Senator DECONCINI. Mr. Owens, I won't be long here because of the time, but there are a couple of things I'd like to ask. When will the public hearings be held?

Mr. OWENS. Well, the notice of proposed rule-making we'll be making with regard to the TCA is likely to come out, I'd say, in early summer of this year. The hearing or the informal air-space meeting for those comments will be immediately thereafter, I would say sometime in the summer.

Senator DECONCINI. Now, are we talking about a hearing where people get a chance to sit down and read a statement to you?

Mr. OWENS. Not a statement like this.

Senator DECONCINI. They can come and tell you what's on their mind?

Mr. OWENS. Yes.

Senator DECONCINI. And that will be held here in Phoenix?

Mr. OWENS. Yes.

Senator DECONCINI. And how long is the average hearing, half a day, a day, or how long?

Mr. OWENS. We'll stage it for as long as it takes. And, in fact, if there are more people than can be accommodated in the one meeting, we would hold additional meetings.

Senator DECONCINI. And after the hearing is held, what's the average time before the decision or rule is made?

Mr. OWENS. Well, a lot, I think, depends on the magnitude of the recommendations or comments. All—in conjunction with this informal air-space meeting, there is the opportunity for written input into the NPRM itself. So you take all of that and then assess it, review it, and then modify, go back and modify that proposal.

Senator DECONCINI. Anyone and everyone and all legitimate organizations can come to that hearing, including the unions, and present their views?

Mr. OWENS. Yes.

Senator DECONCINI. Thank you. Can you explain to me how a general-aviation pilot flying an aircraft without a Mode C transponder identifies where the precise limits of the TCA are?

Mr. OWENS. The TCA limits, we try to establish them with some visual reference to the—to the ground. It may be——

Senator DECONCINI. Some terrain or something?

Mr. OWENS. That's right. A road or something like that. And, of course, the precise definition of that TCA boundary is by radials, via what we call navigation radials, because it has to be precise. It probably is difficult to know, especially for a transient aircraft, to know exactly where that boundary lies.

Senator DECONCINI. So how do you get around that? Somebody who is flying from Sacramento or from Minneapolis and has never been down there, they've got to do that themselves?

Mr. OWENS. That's right. There are aeronautical charts published which depict the TCA's and how they are laid out. And it is incumbent on that pilot to familiarize himself well enough before coming into the area so that he doesn't violate rulings.

Senator DECONCINI. My concern, of course, is safety first. And I'm pleased that you're committed to a process and moving it forward with some deliberation. But the mail I get and the concerns I hear, and those will be expressed here far better than I can express them, is that there's a feeling—I gather from the mail and people I've talked to—that the local concerns are somewhat disregarded. Maybe that is unfair. I don't say that as a fact. I say that that is what is brought to my attention. And I only hope that that will be seriously considered because I find that the organizations and individuals here in Arizona are not categorically opposed to a TCA. At the same time, they've got something really constructive to offer and would like to feel that they are really part of the decisionmaking process.

Mr. OWENS. Senator, you know, these folks are customers, and I'm dismayed that, you know, we have that kind of a feeling out there. The fact is that—that maybe they would like to start out without any proposal, you know, and sit and talk about it for months on end. Well, that's kind of difficult to do and still—and still move forward with any kind of pace. And all we've done is set forth a proposal, and we haven't really done it yet. In fact, we had a draft proposal; it went back for reconsideration for some additional items that we wanted them to look at. So what we will present is a proposal, simply; and we'll be standing by, waiting to hear from our customers.

Senator DECONCINI. I think if you are genuine—and I perceive you are, Mr. Owens, that your agency is prepared to modify the TCA if, indeed, a good suggestion is made—that you won't just counter it by saying that it doesn't work or something like that——

Mr. OWENS. Yes.

Senator DECONCINI [continuing]. That the attitude is not that we know what we're doing; don't tell us, customers; we're doing it for you. And I don't say that critically because I think you have a tough job to do, and my only concern is for our local people. And I'd say that if I represented Kentucky or anyplace else. I really feel that you should listen to them even if you don't do what they want, that they've got the input.

Mr. Bowers, let me just ask you quickly, are you satisfied that you will have as much input as your organization needs in this process?

Mr. BOWERS. Yes, sir. So far, there's no indication of any other way.

Senator DeConcini. There's no indication. And just to follow up on what my colleague Senator McCain said, do we have adequate controllers here now?

Mr. Bowers. Well, to say yes or no really wouldn't answer the question. In a complete list, there are controllers currently that are in different stages of rating. But yet those people still held on our total man-hour count. So one individual that may be checked out in that sector—which, as you know, there are a total of nine sectors in the facility. So if everybody was checked out, yes, there's a sufficient amount.

Senator DeConcini. If everybody was checked out, but everybody is not checked out?

Mr. Bowers. Well, they're in different stages of training.

Senator DeConcini. But until they're all checked out, you really are not at full capacity; is that a fair statement?

Mr. Bowers. Well, it's honestly kind of a play on words. We have the number of controllers we're supposed to have, but they're not——

Senator DeConcini. They're not all qualified?

Mr. Bowers. They're not all qualified, yes.

Senator DeConcini. And how long would it be, assuming there is no attrition or something, until all of them would be qualified?

Mr. Bowers. Well, like I say, because of the different stages of training, three months to the end of the year, possibly.

Senator DeConcini. By that time, unless a lot of movement occurs——

Mr. Bowers. Yes, sir.

Senator DeConcini [continuing]. They would all be qualified?

Mr. Bowers. Yes, sir.

Senator DeConcini. Thank you very much, Mr. Chairman. Thank you.

Senator Ford. Mr. Bowers, let me ask you this: When you say that they're all trained, once they go through school, they have to have this experience; they're not put at the critical area until they are trained to your satisfaction, are they?

Mr. Bowers. Well, sir, they come from different facilities or from the basic radar-training school, and they start—wherever they start in the training program, they'll start on different sectors. And until they're checked out on those sectors, they'll not be authorized to sit there by themselves.

Senator Ford. In this Notice of Proposed Rulemaking which has not been issued yet, and you will put a skeleton out as in relation to the proposed rulemaking?

Mr. Owens. Mr. Chairman?

Senator Ford. And then the meat will be put on it, finalized; we can use that term.

Mr. Owens. Well, it's more than a skeleton. It will be a proposal to establish the TCA air space, realizing that there will be, you know, input into it, based on that proposal, for modification. And that is—that is what we will look to modify.

Senator Ford. What is the average time between your proposal, your public hearing, and the decision by the agency to submit the proposed rule?

Mr. Owens. I'd say nine months to a year.

Senator FORD. Nine months to a year following the public hearing?

Mr. OWENS. Following the first—following the NPRM, the public hearing included.

Senator FORD. All right. Now, you submit for, on the public record, that final ruling?

Mr. OWENS. That's correct.

Senator FORD. How long is that out and available for comment before it becomes final?

Mr. OWENS. I'm not sure of the exact timing on that.

Senator FORD. 30 to 60 days?

Mr. OWENS. I think in that area, yes, sir.

Senator FORD. So what you do, you will file in the Federal Register the proposed rule at the end, which is your recommendation here?

Mr. OWENS. Yes, sir.

Senator FORD. And there is a period for written comment even there, isn't there, beyond the public hearing? So then you can reevaluate that and maybe alter your decision some. So, even with the public hearing, we're not quite through with having time to make input into the decision-making process?

Mr. OWENS. Mr. Chairman, a good example of that, when we went with emergency rulemaking action in Los Angeles, even though we took the action and actually implemented it, we allowed for a comment period after the action had been taken, realizing that there may have been things we—we had overlooked, so—so it is open to modification even after the rule-making had been done.

Senator FORD. All right. When Administrator McArtor increased the restrictions in Los Angeles, was that, four mid-air collisions in the second hundred days?

Mr. OWENS. Four near mid-air collision reports.

Senator FORD. Near mid-air collisions. Well, I wanted to make that correct, because it sounded like you had 11 mid-air collisions, and, boy, you reduced those to only four mid-air collisions.

I want to tell you one thing: I want to get to my destination, and whether my luggage is with me or not is secondary. So I want you to be sure that we understand. And one of the reasons that we're getting so many reports, some people put forth, as it relates to mid-air collisions, that it's in the eye of the beholder, isn't it?

Mr. OWENS. To a great deal, it certainly is, yes, sir.

Senator FORD. Now, you made a statement there, Mr. Owens, that said "enhance pilot training." Now give me a minute or two about enhanced pilot training.

Mr. OWENS. Sure. Pilots are required to go through periodic refresher training.

I'm talking general aviation.

Senator FORD. Okay. We're not talking about commercial?

Mr. OWENS. That's right. They're required to participate in periodic refresher training. We would propose that, included in—in that refresher training, would be a training capsule, if you will, that would focus on flight in and around and through TCA's and—and be generally helpful to a general-aviation pilot in using the system in the most efficient manner that—that we can, you know, without being shut out of it or being disruptive to it. That would be our objective.

Senator FORD. Mr. Owens, give us just a little bit. We've got military flights in this area.

Mr. OWENS. Yes, sir.

Senator FORD. And I suspect there are restricted areas over the military base. What kind of a problem are we getting into in some areas as it relates to general aviation and restriction over military installations?

Mr. OWENS. Well, I think any time you define a piece of air space to be used only by one specific user, whether it be the military or—or commercial aviation, you start to create situations that normally would not occur. In other words, if you can't go into this piece of air space, that means you—you have to go somewhere else, so——

Senator FORD. North, south——

Mr. OWENS. So you are artificially moving the traffic flows around. I think in—in this area that, not only do you have military aviation and commercial aviation, but you have terrain here that restricts a wide-open flow of traffic. So we have other means, of course, to try to accommodate that, and that's called procedures. Our controllers have prescribed methods in which to move airplanes from Point A to Point B and intermix general-aviation and military and commercial traffic. The point I think and why we're here is that—that our contention is that when an airport such as Phoenix reaches a level of traffic density and complexity, that you—that the controller needs to have at his disposal a more positive means of control. It's not necessarily a method in which to shut a specific user out of the air space. In fact, we will do our very best to accommodate that user within the air space, but it will be within a controlled manner. In other words, he will have to have clearance from an air-traffic controller in order to do it.

If I could take one opportunity, I'd like to have Mr. Miller just comment briefly on the staffing situation at his facility because he has some things coming up, I think, that you'll be pleased to hear.

Senator FORD. If you don't let Senators make that announcement. Mr. Miller.

Mr. MILLER. Mr. Chairman, I would just like to elaborate a little bit on Mr. Bowers' testimony as to the adequacy of the staffing. During the staff study research that we had, we identified the need for additional controller complement here at Sky Harbor to actually accommodate the implementation of the terminal control area. We forwarded our request and was authorized an additional six positions. Five of those positions have already been selected. Granted, they will not be on board till probably August or September of this year. However, they will be in and in a training status at the time of a proposed implementation, so we have covered that issue.

Senator FORD. Any other questions?

Senator DECONCINI. Mr. Chairman, would you yield for one further question?

Mr. Owens, you talked about the TCA in Los Angeles that, because of safety needs, I presume you went ahead and implemented it and then continued to take comments and suggestions?

Mr. OWENS. Yes, sir.

Senator DeConcini. Were there any changes made as a result of those comments or suggestions?

Mr. Owens. There are several changes currently under consideration, and I would suspect within the next couple of weeks that—that we will make—make them known.

Senator DeConcini. You anticipate some changes as a result of that comment period even though you——

Mr. Owens. Yes, sir.

Senator Ford. There was some heat as it relates to general aviation in the TCA.

Mr. Owens. The comments were rather loud, yes.

Senator Ford. Sir?

Mr. Owens. The comments were rather loud.

Senator DeConcini. And you are actually going to make some changes?

Mr. Owens. We do propose that.

Senator DeConcini. I take it from your feelings today—I realize that nothing is over till it's over, as Yogi Berra says—that you've decided a Phoenix TCA is necessary?

Mr. Owens. Yes.

Senator DeConcini. And the TCA is coming, because you're already planning for the people and the processes; it's what kind of a TCA you put in, right?

Mr. Owens. Yes, the design of it itself.

Senator DeConcini. Okay. Thank you.

Senator Ford. There's something obvious, and I think Phoenix has a problem, but it's the kind of problem you want; it's growth. You're getting bigger, and it shows that you're doing well. And industry is coming in, and your general aviation is here because you do have new industries and you're doing the right sort of things in the area. So the problem is here, but it's because something is happening out here, and I'm beginning to get the feeling its pretty good. With this growth and with this improvement comes some sort of procedure that has to be worked out between general and commercial and so forth. So I'm pleased that you have the problem, but I'm not particularly pleased that we've got a problem.

We do thank you, Mr. Owens, and all of you, and thank you and look forward to your answering the questions to any member of the committee that might send them to you.

Mr. Owens. Thank you.

Senator Ford. The second panel will be the Hon. Doug Todd, the Arizona State Senate; Mr. James Timm, president of Arizona Pilots Association; Mr. Jack Seeley; Mr. Barry Smith; and Michael J. Conway, president and chief operating officer, America West Airlines.

We'll take a minute so the reporter can change her paper and so forth.

We're ready for the second panel. And, Senator Todd, we'll start with you; then we'll move right across the table and wind up with the president of America West Airlines. So, Senator, you may proceed.

STATEMENT OF DOUG TODD, ARIZONA STATE SENATOR

Mr. TODD. Thank you very much, Chairman Ford, and, again, welcome to Arizona. Good morning, Senator McCain. And, Senator DeConcini, welcome back home for a little while.

My name is Douglas Todd, and I'm a second-generation Arizonan, born in Prescott, and that's where I first soloed in a 65-horsepower Aeronca Champ off of Runway 3 at Prescott Municipal in July 1947. I am a licensed pilot. I own and fly a 1976 Cessna 182 Skylane. It is equipped with Mode C. Both my BFR and my medical are current. I am a state Senator from Legislative District 27, Tempe, Arizona, home of Arizona State University and former home of John and Cindy McCain, and we miss you, John. My Senate leadership sends you all greetings and their best wishes for a successful hearing. I currently serve as vice chairman of the Senate Transportation Committee, and this year I am chairman of the Transportation Committee of the National Conference of State Legislatures, where one of my goals this year is to educate and encourage state legislators across our country to become more knowledgeable and involved in general-aviation and air-space issues.

Lest you jump up quickly and question, certainly I know that the FAA is not subject to legislation from state legislatures. I'm also somewhat aware that they do not seem to be subject to anyone, least of all the constituency they are supposed to be serving.

Let there be no doubt any place that I am fully aware that the safety of passengers of commercial aviation as well as general aviation must be the primary goal of all who utilize and direct the traffic in our nation's air space.

Mr. Chairman and members of the Committee, I'm also very aware of that thing we call the bureaucracy, that arm of government that in too many instances moves almost unobstructed in directions quite contrary to that will of the people, that you and I as elected officials are acutely and many times painfully aware. May I suggest that, by history and observation, we know the second generation of any given bureau or agency has already started to lose the zealot's drive towards the purpose for which it was created and that, by the third and fourth generation, the major purpose of its planners is to find those growth- and power-producing programs that cater to their friends and advocates, produce expansion and, most important of all, perpetuate its own existence.

Such is this super TCA plan for all the wide world. Under the worthy but maybe somewhat tattered banner of safety, this pure, unadulterated power play by the bureaucracy will, along with many other things, adversely affect 70 percent of soaring activities nationwide. Locally it only places very unrealistic ceilings over all three soaring skies near Phoenix. While harassing nearly everything that moves off of the surface of the earth, it will undoubtedly place restrictions on the operations of law-enforcement aircraft, medical-emergency helicopters, and probably do away with air-observed traffic reports altogether. Please consider the situation of the hot-air-balloon pilots who, if the FAA has its way, will be given the same status as the dodo bird. Extinction faces this segment of general aviation as the bureaucracy sterilizes more and more miles of air space in my State of Arizona.

Mr. Chairman, I firmly believe history repeats itself. This current FAA attempt to grab off many more thousands of miles of air space in Arizona is punctuated with urgings of "safety, safety, safety." "Time is of the essence." "Slam, bam, thank you, ma'am." And, "for the good of the people," give us more control.

May I remind you that in 1934 the Bureau of Land Management successfully, through legislation known as the Taylor Grazing Act, ripped off most western states, including Arizona, of thousands of acres of land despite the valiant efforts of many western Congressmen and Senators, including our own then U.S. Senator from Arizona, the golden orator, Senator Henry Fountain Ashurst. As the action was fast-tracked and steamrolled towards passage, Senator Ashurst is on the record with the following, and I quote. Among many other things, he said, "Hurry it up, gentlemen; get this bad piece of legislation through before it begins to smell." He continued, "the worst condemnation the bill could have is to say that time is of the essence. That means there is no time to do justice, no time to examine the bill. Rush it through," he said. "Swallow it now and digest it afterwards," end of quote.

Sounds like the Senator thoroughly understood the bureaucracy. I believe that time and events have proven the dissenting and cautious voices were correct. Although there is no legislative action proposing this air-space grab, the similarities seem very ironic and vivid.

So, Mr. Chairman, as I close my part in this, may I urge your committee to continue oversight in this matter and even to seek more constituent input. May I suggest that you entertain some type of action that would lead to formation of a committee or a board, general-aviation-advisory-planning board or whatever, to help find the most safe and fair solution to all concerned, and I underline "safe." It just might be the time, with Phoenix Sky Harbor Airport and its parallel runways, for implementing arrival and departure corridors.

Thank you again for coming to Arizona for this field hearing and to hear from us, the Arizona airplane drivers and the Arizona airspace users, some of whom may soon join the dodo bird if we keep getting shut out of the planning process. I hope you will have more hearings on this issue in Washington, DC., and I will be happy to try and answer any of your questions.

Senator FORD. We shouldn't have any displays of emotion here, Senator.

Mr. James Timm.

STATEMENT OF JAMES TIMM, PRESIDENT, ARIZONA PILOTS ASSOCIATION

Mr. TIMM. Mr. Chairman, Senator DeConcini, Senator McCain, my name is Jim Timm. I live in Tempe, Arizona, and I'm president of the Arizona Pilots Association. The APA is a nonprofit organization of pilots and aircraft owners. We represent general-aviation interests in the State of Arizona, and our purpose is to promote aviation safety. We appreciate the opportunity to testify before the Subcommittee. APA has worked successfully with the military, with the air carriers, and with state, county, and local officials on a wide variety of matters.

We've also worked successfully with the FAA. When Lynn Helms was administrator, his policy was: It's your air space; the FAA only manages it.

As a result, we were able to provide considerable input to the FAA in the layout of the current Phoenix Airport Radar Service Area or ARSA. When we did this, we were assured by the FAA at that time that it would be safe and protect the flying public. However, the FAA's willingness to cooperate with the users now seems to have declined. The policy now seems to be: We own the air space; we are the experts; we don't need the user input.

And this is certainly a turnabout. Since last year, the FAA has wanted to impose a highly restrictive Terminal Control Area, TCA, around Phoenix. The justification was supposed to be "safety." This causes us to ask the question: Is the user-designed ARSA no longer safe as we were told when we worked with the FAA to lay it out?

As we learned, the true justification was the Cerritos accident in the Los Angeles TCA. Former Secretary of Transportation Dole proclaimed she was going to make the skies safe by imposing nine new TCA's of the same sort where the Cerritos accident and others have occurred. Phoenix was first on the list. The reason has nothing to do whatsoever with aviation safety. Phoenix qualifies for a TCA simply because it meets an arbitrary standard established by the FAA. This does not take into account local conditions. Phoenix has qualified under the standards for nearly ten years, but the Phoenix skies have certainly been safe without a TCA.

A Phoenix TCA would be a huge volume of air space consuming 5,400 cubic miles in extent. It would engulf the whole Valley and, because of its central location, would have a very profound effect on aviation all over the entire state of Arizona. This air-space grab originated in Washington with FAA bureaucrats who have never been at the controls of an airplane. No user inputs were asked.

In November 1987, we received an internal report prepared by the local FAA entitled Staff Study for Proposed Phoenix TCA. There is a copy of it included in my report to you. It was requested by the FAA headquarters, and it had absolutely no input from local aviation users, military or civil. The FAA intends to issue a Notice of Proposed Rulemaking, NPRM, in March, and put a TCA in effect in November. It's obvious the FAA intends to proceed without user input and ignore any and all NPRM responses.

We have reason to believe that the FAA intends to proceed as it sees fit, merely going through the motions required by law. We don't understand how the FAA can honestly state that a Phoenix TCA would be safe. In the report, they admit they don't have the personnel, the equipment, or the facilities necessary to do the job safely.

Furthermore, they haven't even started the long and involved budget process to acquire these. APA members understand that aviation safety is important. But they've told me they don't want a Phoenix TCA. They do want safe skies. So we have spent long hours studying ways to do this with minimal impact on all users.

We have concluded that the present-day air-space system is a mishmash of air-traffic-control systems that date back to the days of the DC-3. It's grown by panic-driven application of Band-Aids to an existing old system. New forms of controlled air space have been piled on top of old existing air-space elements in a complex confusion. The huge proposed TCA is another Band-aid. It will have a negative impact on safety and on aviation in general.

The TCA would directly affect most of the aircraft in the state. It would limit the movements of law-enforcement aircraft. It would drastically restrict lifesaving helicopter, ambulance, and medical-evacuation services. And it would destroy a multi-million dollar general-aviation industry in the Valley. It would completely shut down all ballooning, and Phoenix is the second most active balloon activity area in the nation. It would destroy sail-plane activity, and Phoenix is one of the world centers for this.

APA wants safe air space. We believe the FAA shouldn't impose an antiquated 25-year-old TCA concept when the skies are safe now. Look at the total aircraft operations in the Phoenix area; it shows that they have reached their peak in 1979 and have remained nearly constant since then. But there are always ways to improve anything, and APA believes that even safer skies can result from starting with a clean slate and designing a system that will do what the users want, what the FAA wants, and what the flying public wants; and that is keeping the airliners separate from the smaller general-aviation aircraft.

We have looked at a new concept: Terminal safety corridors. Presently airliners landing and departing Sky Harbor fly in and out of the Phoenix area on predetermined routes. And let's look at a system of sanitized take-off and landing corridors where airliners already fly. If general-aviation aircraft can't enter these safety corridors without permission or clearance, this would free up an enourmous volume of air space that the airliners never use at all.

I have a preliminary map of a terminal safety corridor system for Phoenix; as part of my record. Please understand it only shows what could be done, and it is certainly not to be construed as what we would propose as a final concept. It sets aside all the air space normally used by airliners and leaves the rest open and free for the use of the rest of the ordinary citizens.

Our proposed terminal safety corridors would occupy only 1,800 cubic miles of air space. It would be one-third of the volume of the proposed TCA. Staying inside the safety corridors would pose absolutely no problem for the airliner crews. And other pilots will know where the safety corridors are and would be able to avoid them. Let's face it, there aren't any kamikaze airliner or Cessna pilots out there, and we all are interested in safety.

We urge the FAA to listen to those of us who use the air space and to work with the users and to manage the nation's air space instead of trying to exert absolute control over it. It's time to use modern technology to wipe out this mishmash of the past and establish a workable, new terminal corridor safety system. We believe Phoenix is a unique place to be used for a testing ground for this concept. On behalf of the general-aviation pilots in Arizona, I appreciate the opportunity to be heard today, and I thank you very much.

Senator FORD. Thank you, Mr. Timm.

Mr. Seeley.

STATEMENT OF JACK E. SEELEY, COOWNER OF SEDONA AIR CENTER

Mr. SEELEY. My name is Jack Seeley, co-owner of Sedona Air Center, a considerably smaller commuter air carrier. We operate four single-engine planes, three four-seat and one six-seat airplane. I have greater than 30 years' experience in flying. The closest I've ever come to a mid-air collision has been in the most restrictive air space: TCA's, ARSA's, TRSA's, et cetera, need to be familiar with the terms. Terminal control areas, airport radar service areas, and terminal radar service areas. The newest computer radar that the FAA is using is capable of erasing primary targets or any group of targets at the option of the controller.

I was told by a controller three years ago at Sky Harbor that a KS-135, which is a Boeing 707, that was less than one mile from me crossing from my right to left on a near-collision course, was not there because he didn't see him on his radar. After some questioning, he agreed that there was, indeed, a large aircraft about to have a collision if I had not seen him in turn, but he was being controlled by another controller, and that his transponder was inoperative. Truthfully, that was not quite the answer that I wanted to hear.

Since the advent of the current ARSA, I hear more and more of this. Wednesday at 10:00 o'clock I heard that, northbound, all aircraft calling Phoenix should stay clear of the area and call back in five minutes; the air space is saturated. At the time, I had been counting the number of aircraft, and these were visual-flight-rule aircraft the controller was working, and he was working four airplanes in the north sector, which tells me that there was an overload of IFR traffic, instrument-flight-rule traffic, over the airlines. They're on a different frequency, see, so that we can't hear them unless we tune to that frequency. But it shows that they were giving preferential treatment to the airlines. And the air-space system from the very beginning is supposed to have been and still be first come, first served.

A future TCA at Phoenix will make VFR travel from Tucson or south of the TCA to the north side of Phoenix impossible for small, light aircraft, as the lowest altitude that would be allowed if you try to fly over it would be 14,500 feet. We're unable to go that high or above 14,000 without carrying additional weight and observe general guidelines. Your average small aircraft, trying to go from south of—in Chandler to, say, north to Scottsdale, might take an hour and 35 minutes to make a 15-minute flight. If you try to go around it, you're going to have to go east to Safford or west to Buckeye. It's a hundred and twenty miles in one direction due to the military, or around the other side of Luke Air Force Base, or through some alert areas in that area. It's going to be very difficult.

It's my belief that a super TCA in Phoenix will not enhance safety but will make the controllers' job easy by trying to keep the little guy out. In the past ten years, I have applied with the Phoenix TRACON three times to establish what we in the industry call canned routes for the commercial operators in and out, and the canned route consists of the pre-determined, agreed-to routing including altitude, and it would have a name such as the golf arrival, Charlie arrival, golf departure, whatever. And, using those, the pilot can call in and say, "Here I am. I'm 25 miles north, like, to Charlie arrival." If you're cleared for the Charlie arrival, the only thing the controller has to do is give traffic advisories and clear you to the next controller when you get to the Biltmore. All three times, we've been denied.

And it's not just for my own company but for the other operators in the area. We could all use the canned flight plan. It would cut down the controller workload for our operations by 60 to 70 percent.

In closing, I would like to state that it seems as though the Federal Government, in their wisdom, is trying to ace out the smaller operators or the general-aviation aircraft in favor of the airlines or give them preferential treatment; and I personally will agree with that when the Federal Government also says we are going to limit the freeways and highways of this country to the buses and trucks hauling certain capacities and the little cars have to travel on secondary roads. Thank you.

Senator FORD. Thank you, Mr. Seeley.

Mr. Smith.

STATEMENT OF BARRY SMITH, PRESIDENT, PAYSON PILOTS ASSOCIATION

Mr. SMITH. Thank you, Senator Ford. I'd just like you to know that I am not a highly paid professional witness, and I do appreciate the opportunity to speak here.

Senator FORD. We may learn something from you then.

Mr. SMITH. I am a private pilot. I do happen to fly a Cessna 182, 1966 model. I am president of the Payson Pilots Association, which is an organization of 90 plus members in the Payson area, which is a rural community approximately 68 miles north of here. Our membership includes businessmen, doctors, flight instructors, and others who are simply interested in aviation.

It is our belief that imposition of the proposed TCA would have a negative impact in three areas. The first and most important area is safety. The presence of the TCA would force many pilots that are transiting the area to skirt the TCA; and, consequently, they would be flying through the military operation areas of either Luke Air Force Base or Williams Air Force Base. The TCA would act as a funnel, concentrating many aircraft into the same routes around the TCA.

The second negative impact is economic. The cost to equip an aircraft for TCA operations is significant for many pilots. For those that choose not to participate in the TCA, the extra flight time necessary to skirt the TCA is going to be a significant factor. For those pilots with businesses—business at airports located within the TCA, they will be forced to purchase Mode C equipment.

Our third concern associated with the TCA is access to the TCA. Right now delays are being experienced by pilots attempting to enter the ARSA. When you increase the controlled air space to that of the proposed TCA, the number of aircraft that is going to be handled by controllers is going to increase drastically. I'm here to tell you, pilots are going to be denied access to the proposed TCA, regardless of whether they have Mode C equipment or not. This is going to affect those doctors, those businessmen, and the private pilot flying into the Phoenix metropolitan area.

In conclusion, we feel the proposed TCA is an overkill to legitimate safety concerns. However, we feel the implementation of the TCA will have negative impacts on safety, on economics, and access to airports within the TCA. We support the corridor concept and feel it would answer the concerns over mixing general-aviation aircraft and air carriers in the same air space. The definitions of these corridors should result in increased safety and minimize the impact of access and economics on the general-aviation pilot. As it is proposed, the TCA is not needed; it is unsafe; it denies access and imposes a significant economic burden on many pilots. Thank you.

Senator **Ford**. Mr. Conway?

STATEMENT OF MICHAEL J. CONWAY, PRESIDENT AND CHIEF OPERATING OFFICER, AMERICA WEST AIRLINES, INC.

Mr. **Conway**. Chairman Ford, members of the subcommittee, I am Michael J. Conway, president and chief operating officer of America West Airlines, a Phoenix-based post-deregulation airline that began operations four and a half years ago.

The subcommittee is to be commended for conducting these hearings. We welcome you and very much appreciate the opportunity to appear today to discuss the establishment of a terminal control area at Sky Harbor International Airport, a very serious subject we have before us today.

Before I begin, I would like to mirror Chairman Ford's comments that, as a state, we truly are blessed to have two outstanding individuals representing our fine state in the U.S. Senate. And, to the extent you may find it interesting or even remotely interesting, you caused me, Chairman Ford, to reflect on your description of the flat lands. For the record, I am—I was born in the Commonwealth of Brooklyn, New York, in the Flatbush section of Brooklyn on Flatlands Avenue. Welcome to Arizona, Mr. Chairman.

Senator **Ford**. That sure was misnamed, wasn't it?

Mr. **Conway**. Yes, sir.

By way of background, America West Airlines is one of the few remaining post-deregulation carriers. By some accounts, there have been 104 airlines of various sizes formed since the deregulation act of 1978. There are four carriers left; 100 went out of business.

There is no higher priority than safety at America West Airlines; everything else is a distant second. And safety will continue to remain our highest priority, and we are most proud of the record that we have in this area.

We began operations as a new-entrant airline in August 1983 with three Boeing 737-200 aircraft operating to and from our hub in Phoenix to the cities of Los Angeles, Kansas City, Colorado Springs, and Wichita. Since that time, we have grown dramatically, now serving a total of 43 cities in the Midwest, Southwest, Northwest, Canada, California, New York, and the Washington, DC., area from our Phoenix and Las Vegas hubs, operating a total of 60 Boeing 737 aircraft, seven Boeing 757 aircraft and three de

Havilland dash 8 aircraft, de Havilland, a subsidiary of the Boeing company. I suppose you could say we're an all-Boeing airline. In 1987 we carried over 10 million passengers. We currently average over 1 million passengers a month. We have a total of approximately 7,500 employees, the vast majority of which live in the Phoenix area.

Insofar as the future is concerned, America West will take delivery of a total of 15 new Boeing 737-300 aircraft in 1988 and 1989, as well as three additional Boeing 757 aircraft in the fall of 1989. The average age of our fleet is approximately five years. That compares to the average in the United States of 12 years. By the end of 1988, notwithstanding the passage of one additional year, by taking in these 15 new 300's and three more new 757's, the average age of our fleet will be four years, making the America West fleet the most modern of any airline in the world.

As you can see, we've come a very long way in a relatively short time. A great deal of our success has come about as a consequence of the dramatic growth that has taken place in the Phoenix metropolitan area over the last several years, the attractiveness of Phoenix as a destination in and of itself, and the desirability of Phoenix as a hub for passengers traveling throughout the United States, which brings me to the serious subject we have here today: How can we most effectively utilize the air space in this area to meet the ever-growing needs of all of the people in the Phoenix area?

The growth and economic development of the Phoenix area over the past several years has been nothing short of phenomenal. In 1985 the population of Maricopa County was 1.8 million, which placed it as the 22d largest metropolitan statistical area in the United States. By the year 2000, the population is expected to reach 2.9 million, which is 61 percent above the 1985 level.

With respect to Sky Harbor International Airport, the growth in aircraft operations at Sky Harbor has mirrored the population and economic growth in the Phoenix area and is projected by the FAA to continue at high levels into the future as well. Thus Sky Harbor ranked, in fiscal year 1985, as the 19th largest airport in the United States with a total of 6.7 million passenger enplanements. Enplanements at Sky Harbor for the second quarter of 1987, the most recent quarter for which such data is available, were two and a quarter million, thus indicating a substantial increase over 1985 levels. The FAA has projected, in its most recent aviation forecasts, that passenger enplanements will reach 10.1 million in 1990, making Sky Harbor the 15th largest airport in the United States. And in fiscal year 2000, the FAA has projected the total number of enplanements will jump to 18.1 million, a 170-percent increase over 1985 levels, thus making Sky Harbor at that time the 11th largest airport in the United States.

Insofar as total aircraft operations are concerned, Phoenix ranked 13th in fiscal year 1985 with a total of 394,300 operations. In 1987 there were a total of 438,439 operations, of which 252,964 were air-carrier operations, a 13.4 percent increase over the 1986 air-carrier-operations levels. This total number is projected by the FAA to rise to 475,000 in fiscal year 1990, making Sky Harbor the 7th largest airport in the United States, and to 582,000 in fiscal year 2000, which would maintain its position as the 7th largest airport. And of that total, commercial aircraft operations are expected to reach 478,700 by the year 2,000, which is an 83 percent increase over the 1985 levels.

In light of this population growth and economic expansion in the Phoenix area and the substantial actual and projected increase in operations at Sky Harbor, the Federal Aviation Administration is to be commended for recognizing these factors and proposing the establishment of a TCA for Sky Harbor. Indeed, it is a credit to the people of Phoenix that we have grown as a community to the point where the FAA believes that the creation of a TCA is necessary. As the committee is no doubt aware, the FAA established TCA's at 21 major air carrier airports in the United States in the 1970's. And in the late 1970's, three additional TCA sites were selected: San Diego, Honolulu, and Phoenix. The controller strike in 1981 and the rebuilding of the air traffic work force have, to date, impeded the implementation of a TCA at Phoenix.

But we are pleased that the FAA is once again giving attention to this matter. We understand that various aviation interests in the Phoenix area have raised concerns about the impact of a Sky Harbor TCA upon their operations and will listen today with interest to the issues that they raise. We look forward to working with these groups and the FAA in developing a terminal control area responsive to those concerns that meets the needs of all of the people of Phoenix, which in the end must be the goal of all that are involved in—in this effort. Mr. Chairman, we appreciate the opportunity to present this testimony today and would be pleased to respond to any questions that you or the members of the Subcommittee may have with respect to this important matter. Thank you.

[The tables referred to follow:]

TABLE I.—TOTAL PASSENGER ENPLANEMENTS AT LARGE HUB AIRPORTS [1]

[In thousands]

Airport	Fiscal year—		
	1985	1990	2000
Chicago O'Hare	23,038	30,458	40,655
Atlanta	21,620	26,402	33,212
Los Angeles [2]	19,547	21,678	25,541
Dallas/Ft. Worth	18,276	23,474	34,675
New York Kennedy	16,983	18,438	22,500
Newark	14,408	18,811	27,417
Denver	14,387	21,313	34,281
San Francisco [2]	12,233	14,965	17,799
Miami	10,897	13,500	18,581
Boston	10,343	12,702	18,528
New York LaGuardia	10,238	12,580	15,174
St. Louis	9,614	12,236	17,715
Honolulu	9,109	11,800	15,460
Minneapolis/St. Paul	7,468	10,244	14,476
Pittsburgh	7,328	9,797	18,806
Detroit	7,291	9,448	10,717
Washington National	7,181	7,511	7,924
Houston Intercontinental	7,001	8,400	12,535
Phoenix [2]	6,668	10,114	18,180
Seattle-Tacoma	6,151	8,450	11,050
Philadelphia	5,578	7,125	11,507
Las Vegas	5,193	6,840	9,185

TABLE I.—TOTAL PASSENGER ENPLANEMENTS AT LARGE HUB AIRPORTS [1]—Continued

[In thousands]

Airport	Fiscal year— 1985	1990	2000
Charlotte	4,998	7,246	11,083
Orlando	4,950	6,980	9,931
Tampa [2]	4,359	5,624	8,250
Salt Lake City	4,235	5,588	7,275
San Diego [2]	4,000	5,245	8,276

[1] Includes U.S. certificated route air carriers, foreign flag carriers, supplementals, air commuters and air taxis.

[2] Forecasts as shown in individual hub forecast reports (or as adjusted).

Source: FAA Terminal Area Forecast FY 1986–2000.

TABLE II.—TOTAL AIRCRAFT OPERATIONS AT LARGE HUB AIRPORTS [1]

[In thousands]

Airport	Fiscal year— 1985	1990	2000
Chicago O'Hare	768	833	934
Atlanta	750	794	816
Los Angeles[2]	546	610	634
Dallas/Ft. Worth	548	624	672
New York Kennedy	339	349	379
Newark	400	421	454
Denver	503	565	692
San Francisco[2]	396	439	461
Miami	329	384	494
Boston	403	456	549
New York LaGuardia	367	370	370
St. Louis	411	492	645
Honolulu	354	397	505
Minneapolis/St. Paul	362	426	476
Pittsburgh	361	400	478
Detroit	366	468	524
Washington National	331	360	400
Houston Intercontinental	316	362	521
Phoenix[2]	394	475	582
Seattle-Tacoma	236	268	325
Philadelphia	351	410	524
Las Vegas	302	378	509
Charlotte	330	431	537
Orlando	197	262	360
Tampa[2]	268	318	403
Salt Lake City	252	325	480
San Diego[2]	161	185	219

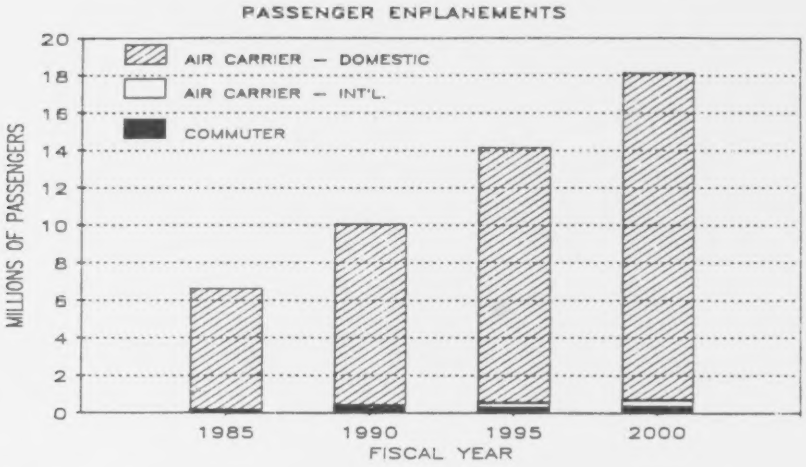
[1] Includes total itinerant and local operations performed by commercial air carriers, air taxis, military, and general aviation.

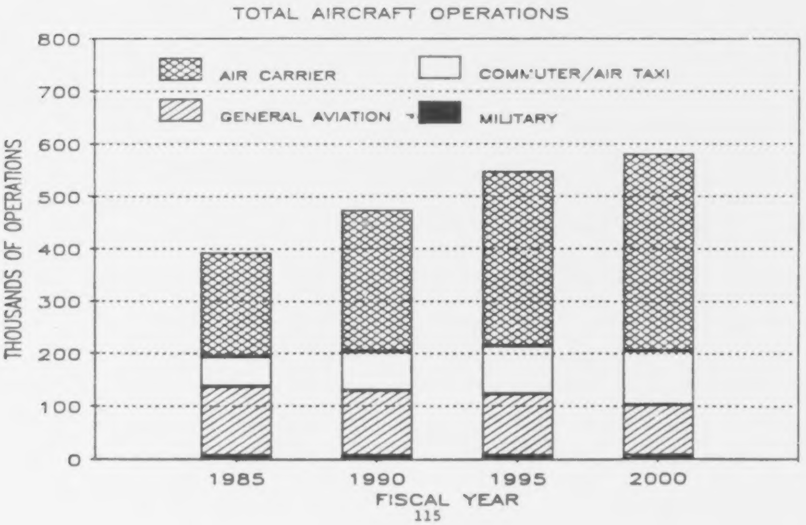
[2] Forecasts as shown in individual hub forecast reports (or as adjusted).

Source: FAA Terminal Area Forecasts FY 1986–2000.

Table III

PHOENIX SKY HARBOR INTERNATIONAL AIRPORT





Senator Ford. Thank you, Mr. Conway. Senator McCain?

Senator McCain. Thank you, Mr. Chairman. I want to thank all of the panelists for their very important perspective on this issue. Mr. Chairman, if I could just make note of something here without being too contentious, the first panel members of the FAA assured the members of this committee that they would listen to the concerns of the people who want to have an input into this process. They came here from Washington, D.C., and other places, and I notice that they have left. I think that perhaps that doesn't give one a profound sense of confidence that they will listen to the views of the people here.

Senator DeConcini. Would my colleague yield on that subject matter?

Mr. McCain. Be glad to.

Senator DeConcini. The same observation. I think it's crystal clear, and I wonder if it's up to the Chairman—if there's precedent or if it's possible to send this part of the testimony to Mr. Owens and Mr. Miller and the other FAA officials, if that's not too much of a burden for that to occur, because they might have had to go some place that's legitimate. But I'd sure like them to hear this testimony.

Senator Ford. As Senator Todd said earlier, testimony will follow with a mean letter.

Senator McCain. Or perhaps next time we could reshuffle the appearance of the panelists. Perhaps, as Senator DeConcini said, they may have had to go some place. But I feel it's important for everyone to hear the testimony of all the panelists. That's why we invited them, and that's why they're taking some time from their busy schedules to be here. I'll try to be brief in my questioning because we do have another panel that wants to speak.

Senator Todd, I want to tell you how much I appreciate your very forthright and obviously candid statement. I think you articulate not only your concerns but also those of other members of the state legislatures and the committees on which you sit. I think they may have sent their most articulate spokesperson here. I also appreciated very much having you as my representative in the legislature, even if you did raise my taxes.

But if I could just ask you one question.

Mr. Todd. Surely.

Senator McCain. Perhaps, Senator Todd, you could elaborate a little bit on your statement. You said, "May I also suggest that you entertain action that would lead to formation of general-aviation advisory planning boards to help find that most safe and fair solution."

Could you tell the committee a little bit more about what you would envision a general-aviation advisory planning board to be composed of and how they would function?

Mr. Todd. Mr. Chairman, Senator McCain, the reason that I tucked that particular statement in my remarks was to emphasize the position that the general-aviation community feels here, in that we would be willing to meet and confer at any time and place if we had the true feeling that there was a worthy cause to follow. And—and by that I mean that when this NPRM comes out, its proposed action has (as far as FAA's concerned) been history that: (what they really mean) my mind's made up. Don't confuse me with the facts.

And I think that concerns all of the users in Arizona, that this decision has been made in a closet in Washington. And that, Senator, just doesn't equate to—somehow, to have access to input to the process and that. So I'm not hung up on what it's named. But I would like for it to have official status that would say we have entree to the planning process.

Senator **McCain**. Well, I think it's an excellent idea, and I would like to see if we could push it in some fashion, either in a regulatory or, if necessary, a legislative fashion because I agree with you, after the decision has been made, it's very rare that those conclusions or decisions are changed. I think you have to be in the inception of the planning process. I think it's a very important recommendation.

Mr. Timm, thank you for your statement here. I know you represent literally thousands of citizens of Arizona that enjoy not only the luxury but the enjoyment of flying general aviation. And my only question to you is: Since you have been involved in this issue for a long time, why do you think it is that corridors such as those you describe in some detail have never been given serious consideration by the FAA?

Mr. **Timm**. Our board of directors have discussed this very question. The conclusion reached was—perhaps because corridors were not suggested by FAA headquarters in Washington—as a viable solution for Phoenix, it was not pursued by the local FAA. Phoenix has a rather unique location. We have parallel runways. The terrain is such that we think it would accommodate corridors. I understand corridors have been tried in another part of the country, but at a site where they had crossed runways and in a very complex air-space situation. It was not quite as well laid out and orderly as it could be here in the Phoenix area. The Phoenix air carrier arrivals and departures are along pretty much a fixed path from the east and west. We feel a corridor concept could be implemented if it was given a fair trial basis. we believe, because of the weather conditions we enjoy here and the layout of the actual airport facility, Phoenix would be a suitable site to try this concept out, where it may not have been elsewhere.

Senator **McCain**. Well, I would agree with you. If there is any place in America where this should be tried, I would suggest it would be right here in Phoenix Sky Harbor Airport. Thank you.

Mr. Seeley, we've had the opportunity of knowing each other. Mr. Seeley has the pleasure of operating out of the most beautiful airport in America, and I hope sometime, Mr. Chairman, you can see that in Sedona.

Senator **Ford**. Oh, I thought that was in Owensboro, Kentucky.

Senator **McCain**. I think that's the second. But, since you're the Chairman, maybe Sedona is the second.

Senator **Ford**. You're learning, John.

I want to tell you, if we lose our good humor in this thing, we might as well pack up our bags and go home. We work hard at it, and we enjoy each other. I hope you don't take us wrong. We do get along with each other very well.

Senator McCain. Mr. Seeley, you provide a very important service to the people of Sedona and the surrounding areas. What would it do to your business if a standard TCA, as envisioned, were put in place here in Phoenix?

Mr. Seeley. First off, you would have to look at my entire business. I basically have three areas of operation in my business. My commuter airline is the major operation, no doubt. But I also run a flying school, charter service, and rental aircraft. As far as the airline goes, I can perceive some delays. As far as the aircraft rental business goes, it would just about eliminate for—for the average novice pilot to even want to come down here. It's just too much of a problem. It's nearly too much of a problem now with the current restricted air space that we have. I don't know if—if the people understand the air-space structure in Arizona. We've already lost nearly 50 percent of the air space in Arizona to the military. And in the southern half, it's greater than 50 percent. It just appears that—that it's a—it's a move to—to further restrict the smaller aircraft operators.

Senator McCain. Thank you.

Mr. Smith, we're talking about, for TCA requirements, Mode C installation in all general-aviation aircraft. My understanding is that it's around a cost of $1,800 to $2,000, is that your understanding, too, for installation of Mode C?

Mr. Smith. That might be a little bit on the high side. It depends on where you have it done, actually.

Senator McCain. Let me ask you: Do you believe that that is an unbearable financial burden for the average general-aviation pilot that you associate with?

Mr. Smith. Senator McCain, the people that I represent and the group that asked me to speak here, that is not the major area of concern, the economic part of it. The major area of concern is the access to the TCA. We do not mind—people I've talked to do not mind—paying to have Mode C equipment installed. What they do mind is, after having Mode C equipment installed, trying to enter the TCA and being told, "Call back in five minutes; call back in ten minutes." And while we're flying 360's out there, hoping not to get run into, we're trying to get into the TCA. That is what we're concerned about. The economic impact, yes, it's there, but it's not of primary concern. The access is.

Senator McCain. Thank you.

Mr. Conway, thank you for your testimony. We all in Phoenix and the State are proud of our airline and the employment that you have provided and the boost to our economy. But let me also mention something to you, if I could; and that is that, as proud as we are of your airline, we want to make sure that you understand that it's important—doubly important, since you are based here in Phoenix—that you work as closely as possible with the other interests that are represented at this table. And I have to tell you, in all candor, that I have heard from some people that America West has not chosen to work with some of the other interests. I hope that you will assure me and, more importantly, them that you will do whatever you can to make sure that their interests are taken into consideration as we go through this decision-making process, being fully aware of the fact that we are extremely proud of what America West Airlines has done not only for Arizona but for the entire airline industry,

Mr. CONWAY. This might take one second here, Senator McCain. It was my understanding that we were working with all of the various groups in this endeavor. And if that is not the case, I give you my company's commitment that we will do so and spend whatever time and resource is required to meet—to reach an equitable solution to this very serious subject.

Senator MCCAIN. Thank you very much, Mr. Conway. I'm sure that you will. Thank you, Mr. Chairman.

Senator DECONCINI. Mr. Chairman, I'll just start with Mr. Conway because the microphone is there.

Mr. Conway, if you haven't taken a position, fine, but does America West support a TCA?

Mr. CONWAY. Yes, we do, Senator.

Senator DECONCINI. You do? And in doing so, do you feel that the FAA will give you ample input into what the TCA should be? Or do you believe that whatever it is will be better than what you've got presently?

Mr. CONWAY. I think the overall track record of the FAA is, like many other agencies, mixed. In some cases, it's very good, and in some cases it leaves something to be desired. I can assure you that we will be very aggressive with the agency in working with them to make sure that our input is given substantive treatment.

Senator DECONCINI. Thank you.

Mr. CONWAY. And, to the extent that we can help the other interested parties, we would be more than willing to be the messenger for their interests as well.

Senator DECONCINI. You think there may be grounds for some common interest here between noncommercial entities and yourself?

Mr. CONWAY. I think so, Senator. I think this is such a complex area. The various parts of the country where these standards are in place have many different characteristics to it. It is certainly possible that it can be tailored in—in a more specific way that meets the needs of all of the people who use the system.

Senator DECONCINI. What about the corridor proposal?

Mr. CONWAY. I think that one is going to require some additional study. I would not be prepared to say, carte blanche, that we should do that. But I think the overriding issue is that if you believe that some form of terminal control area makes sense when an airport reaches a certain density level, then this particular airport already exceeds several of those which have such systems in place.

Senator DECONCINI. Mr. Smith, you mentioned about being denied access to a TCA. And I'm sorry, I'm not a pilot, so I haven't had personal experience. But does that happen? Are you denied access if you go to L.A. and try to get into a TCA?

Mr. SMITH. Absolutely. You can't get into LAX unless you're going in on a flight plan. And, even then, you may not get in.

Senator DECONCINI. And, even then, you might not get in?

Mr. SMITH. Yeah.

Senator DECONCINI. Mr. Timm, do I understand from what you're saying, representing the Arizona Pilots Association and all private pilots, that you oppose any TCA? Is there such a TCA that could be put together that you might find acceptable?

Mr. TIMM. We would support any kind of change in the air-space structure in Phoenix, no matter what you call it, a TCA or whatever, only if it's going to enhance safety. We do not see the need to sterilize vast amounts of air space that are not being used by the air carrier. The current TCA concept is to use a large diameter block of airspace. Because of the layout of the airport, and the arrivals coming in from one direction all the time, there are portions of the air space adjacent to Phoenix that are not used by the air carriers that could effectively be used by either sail planes, balloons, or light aircraft.

Senator DECONCINI. What I'm really wanting to ask, and maybe you can help me with this: Could a TCA be constructed that you think would provide for the safety that we all unquestionably want and yet take into real consideration what your needs are?

Mr. TIMM. Yes, sir, I think it could.

Senator DECONCINI. Thank you.

Mr. TIMM. If it was developed with substantial user input.

Senator DECONCINI. Right.

Senator Todd, do you agree with that?

Mr. TODD. Mr. Chairman, Senator DeConcini, yes, I really do. And I am more convinced now, because in just this short period of time, generating our—our enthusiasm for inviting thoughts and input just on this small panel's basis and the folks that have supported our preparation for this meeting. I'm convinced beyond any doubt that a safe control area can be designed that fits Phoenix, Arizona, Sky Harbor Airport with parallel runways, with mountains on the north, deserts on the south, a military air operation on the east, and one on the west.

Senator DECONCINI. And could that still be called a TCA?

Mr. TODD. Mr. Chairman, Senator DeConcini, if the FAA wants to call it a TCA and we can educate the general-aviation pilots that the TCA means a controlled safe arrival and departure system to transition from that high altitude zone where those big guys fly to the ground and then let us (General Aviation) have some of the other area in between, absolutely.

Senator DECONCINI. Thank you.

Thank you, Mr. Chairman.

Senator FORD. I wanted the panel to indulge me just a minute. And, John, you might update me and the staff also. We've been traveling down this course of problems in the air and safety for some time with kind of a Band-aid approach, I think that you mentioned a few moments ago, to everything we do. And I've just been chairman of this subcommittee now 12 months. I found, when we came in, that we had over a $6 billion surplus in the airport and airway trust fund; that's surplus. Every time you buy a ticket, you pay 8 percent tax. Hell, if you're not going to use it, you ought to quit charging it, is my philosophy. So we decided we were going to use it. We increased the funding for airport improvements by 70 percent this year. We're not using any additional money, just taking what we have. We increased that to 70 percent, put it on a five-year funding basis with an increase out in future years. We made these towers that are on contract year to year. We are considering where they were going to be in place and that sort of thing. We made them permanent, gentlemen, for more safety. We wanted a thousand, net, new controllers, and we had a fight with the administration, and they yielded on 955. Now, that's a Henry Clay compromise. I'm from Kentucky.

Senator DeConcini. It's a win.

Senator Ford. It's a win. So we got the 955. I found, when we went into it, that we had scattered to the four winds the construction of the new communications system for the air. You know, everybody was nickeling and diming it to death, and nobody knew what the heck the others were doing. So we got us a management team, brought them in; they're now pulling it together. And we've gained, in the last six months, better than a year, based on the time we were going. And we found we had money for the host computers to go to the 23 regionals. And they weren't being installed, and the GAO said it wouldn't work. So we put one in Seattle, watched it be installed. They said it wouldn't work. We went back out, and they admitted that they were wrong, that it would work. And we're now moving expeditiously to put in all 23 of them, to have them there as soon as possible. And we've been dedicating several of them this year. We've got a lot of problems. I want to do the best we can; that's the reason I'm here.

And the restricted air space, you've got a problem here. But the next field hearing we have will probably be in the panhandle of Florida. You've got four military bases that have air restrictions. And we're getting here—we're getting part of that here when we're getting the general aviation part and the TCA problem, which I think is very, very important. We've got to agree with you. We've got to make it safe. We've got to have the input. I promise you that this testimony that you all gave and what we're talking about now will go to Mr. Owens and to the administrator of the FAA. And so we're going to do those things. And I assure you—and John's going to see that I do it, and Dennis is, too—that we listen to you. We paint with a broad brush in Washington; you do that here in Arizona. There's no way you can pass one piece of legislation that fits all people and all problems. So you have to have some flexibility, and that flexibility is a notice of proposed rule-making. That means that they present that proposal; and then we have testimony on it; you have input; they submit the rule; and then we have public comment after that to be sure we get as much from the public into that as possible. So it's not a—its been a rocky road.

Now we have the consumer legislation out there that Mr. Conway I'm not sure likes all of it, but he does report on time and delays and luggage being lost and delayed and that sort of thing. And we're going to say to an airline that you cannot reduce your flying time from point A to point B to less than it takes you to fly there because, if you do, you're late before you start. And I think that we're beginning to move in a direction, Senator Todd and others, that I hope will begin to see some improvement. I see the commercial problem as you do; there's no question about it. You want growth. You want to see that 7,500 employees grow to 10,000, you know; and they will. I've got confidence that the airline will do that, so we have to protect the growth of the area, too. So it does become a balancing act. I intend to have both sides and have that input.

I didn't mean to get into this, but it's something that I thought it might be good just to say and kind of let you know where we're going.

I've got another proposal out there that is beginning to nibble away at some folks because it's beginning to get a little steam. I have a bill called S. 1600, and that's for an independent FAA, so that we can take them out of the Department of Transportation. They won't be a political appointment. We'll get somebody that's going to be there for seven years and won't be there on a whim and won't have to go through all various and sundry bureaucrats who say, "You're spending too much money; take that money and put it somewhere else for aviation safety." Have I got anybody for or against the independent FAA at this panel?

Mr. TODD. Well, Mr. Chairman, I don't think you've got anybody of the four on this end opposed to it at all. I have no idea where Mr. Conway is coming from.

And you stirred up another item when you talked about the dollars in the unified budget of the airways trust fund being tucked in underneath the unified budget and it is there for a little convenient action; (congressional) that takes place. And basically, yes, the difference between your operation and ours is—I think you have more zeros behind the numbers that you all deal with. But I do understand, and I do appreciate the comments you've aired.

Senator FORD. And our debts are larger than yours, too. We print it, you know. We've stopped the printing question.

Mr. Conway, do you want to talk about the independent FAA?

Mr. CONWAY. Mr. Chairman, we certainly could support an independent FAA if for no other reason than my personal opinion. I'm so impressed with your enthusiasm and concern for those very important issues. You've convinced me that you certainly are going to look into these matters with an emphasis on improvement towards safety and a more effective transportation system, and, if nothing else, if you're for it, so am I. So I congratulate you on that effort.

Senator FORD. Boy, it sounds like I wrote that. Thank you very much, Mr. Conway. You'll go far.

I don't have any other questions.

If you all have thought of something, during my questions, that you'd like to put into the record, because this will be made a record and all the committee members will have an opportunity to read it.

Mr. TODD. One small item, Mr. Chairman.

Senator FORD. Yes, sir.

Mr. TODD. That is to let you be aware, and Senator McCain also, that it is the intention of an ad hoc subcommittee from the Senate Transportation Committee to go into hearings and bring all of these people and others to talk because this was some short notice. A lot of people who wanted to speak to you and desire to have their concerns in the record and voiced and part of the minutes anyway we know that we can get our comments in, and we're all working toward that. So they'll be forwarded to your committee. But then we will take that information, Mr. Chairman, and put it before the Arizona State Senate and try to produce a resolution that will also emphasize the position of our constituents in Arizona and get it back to you as soon as we can.

Senator FORD. The record will stay open two weeks

Mr. TODD. Mr. Chairman, they informed us already two weeks on the 12th, and so we are shooting for the middle of that week to have everything in to your office.

Senator FORD. Let's just make it official then, for the record, that the record of this hearing will stay open for two weeks from today to receive testimony not only from elected officials but from anyone other than that, the public, that would like to submit a record, testimony for the record. It will be there. Thank you.

Senator MCCAIN. I'd like to take a moment to recognize Representative Bob Denny, who is an Air Force fighter pilot—guess they never retire who has taken a keen interest in this issue on the house side of our state legislature and has worked very closely with Senator Todd, and I appreciate your presence here today.

Also, if I might mention Senator Ford's, and others' legislation, which the Senate passed last year, concerning airlines' on-time performance, Senator Hollings told us that he went to the counter of an airline in Charleston that will remain unnamed and said he wanted one of his bags sent to Chicago and one to Detroit and one to New York. And they said, "Well, we can't do that." And he said, "Why not? You just did it yesterday."

Senator FORD. Thank you, gentlemen. We've enjoyed your testimony and look forward to working with you.

Mr. TODD. Thank you.

Senator FORD. Our next panel is Pete West, vice president, government and public affairs, National Business Aircraft Association; Webster B. Todd, senior vice president for government and technical affairs; Captain Richard Russell on behalf of the Airline Pilots Association; Ronald L. Swanda, manager, systems operations, General Aviation Manufacturers Association; and Larry Sanderson, executive director, Soaring Society of America.

Could we take our seats now that we've had our seventh-inning stretch? May I have your cooperation, please? Could I have your cooperation, please? We have this last panel. I'm going to leave here and go to Seattle.

Mr. TODD. It's raining there.

Senator FORD. I've got my raincoat. Listen, when you leave 6 degrees and get out here, you don't want to leave this place. I can understand where it's going. Where I live, you can't get there. So we'll have the testimony. The other two Senators will be back.

STATEMENT OF PETE WEST, JR., VICE PRESIDENT, GOVERNMENT AND PUBLIC AFFAIRS, NATIONAL BUSINESS AIRCRAFT ASSOCIATION

Mr. WEST. I am Pete West, Jr., vice-president for government and public affairs of the National Business Aircraft Association. I appreciate the opportunity to appear before you and Senator DeConcini and Senator McCain to provide the association's views on general-aviation safety. I especially appreciate the opportunity to be here in Arizona again, the home of the Grand Canyon, Sedona, Sedona airport, Monument Valley, and the new home of the NFL Cardinals. And it is wonderful to get away from Washington, DC, where it is 5 or 6 degrees, or at least it was last night.

NBAA represents the aviation interests of business in the United States. Our 5,300 member companies, including 85 percent of the Fortune 500 companies, are regular users of the air-traffic control system. These companies, along with the other members of the association, have a vital interest in the issue of aviation safety. For the purpose of this hearing, I would like to talk about our safety record and some of the current programs we feel are important to maintaining a high level of safety.

The National Transportation Safety Board recently released the accident statistics for 1987. General aviation, of which business and corporate aviation is but a part, finished 1987 with its safest year ever.

Safety is paramount among our member companies. Most operate to standards often more stringent than the appropriate federal aviation regulations. The vast majority of our member-company aircraft are operated under instrument-flight rules and are also well equipped with state-of-the-art navigation, communication, and surveillance equipment. But despite the excellent news in recent accident statistics, our members' safety efforts do not rest there. A great deal of time and money is spent on expensive training to make our aviation activities safer. In addition to the safety programs provided by our members, there are other programs we feel will have a positive influence on safety and need continued emphasis. We believe the terminal control area, TCA, program represents one of these positive efforts. TCA's are designated around our nation's busiest airports to provide radar separation service to all the aircraft operating in that area.

However, TCA's became suspect after the Aeromexico mid-air collision occurred in the Los Angeles TCA near Cerritos, California, in August of 1986. Then FAA Administrator Donald D. Engen directed an internal task force to review TCA areas and to recommend ways to improve the safe and efficent operations of aircraft in and around the TCA's. Recommendations included a standardized size and shape, simplified operational rules, and a revised establishment criteria.

NBAA members have never opposed the designation of a TCA or the requirement to install additional equipment aboard aircraft to operate in that air space, provided that the FAA has the ground-based equipment and the staffing in place to render the required ATC services without causing delays to the IFR traffic that must operate to and from the primary airport. This is one reason we have been strongly supportive of efforts at designing routes or corridors through TCA's to accommodate VFR traffic, visual flight rule traffic.

We support the designation of a TCA here in Phoenix due to the burgeoning air traffic and remain convinced, despite the feelings of certain FAA officials here today, that the FAA, in consultation with the various users in the Phoenix area, can design a TCA that maintains a high level of safety and contains provisions for VFR traffic. I'm encouraged because I know that Chairman Ford, Senator DeConcini, and Senator McCain will ensure FAA response to the users, the Phoenix area users.

Another program that needs continued support is the Traffic Alert and Collision Avoidance System. NBAA has been an active participant in several activities to ensure that the FAA develops the best possible TCAS for installation by NBAA member companies, including monitoring the airlines' experience with the limited installation program, LIP. This important work on the limited installation program must continue so that the TCAS units that are eventually installed in our member-company aircraft, as well as other aircraft, are operationally acceptable to flight crews.

The implementation of TCAS has some associated issues that must also be dealt with in the coming months and are of critical importance to operators who plan on installing TCA's aboard their aircraft.

TCAS equipment in an airplane interrogates the ATC transponders of other aircraft in its vicinity. By computer analysis of the replies, the TCAS equipment determines which of these aircraft represent potential collision hazards and provides appropriate advisory information to the flight crew. These aircraft are called "intruders."

If the intruder aircraft is equipped with a mode "A" transponder, range and azimuth information will be provided to the pilots of the TCAS equipped airplane. However, if the intruder aircraft is equipped with a mode "C" transponder, altitude information will be provided in addition to range and azimuth.

The TCAS Program consists of three categories of equipment: TCAS I provides only trafffic advisories [TA's]; TCAS II provides only TA's and resolution advisories [RA's] in the vertical plane; and TCAS III provides TA's and RA's in both the vertical and horizontal planes.

The TCAS II units use algorithms that must ensure that the alert rate in normal traffic densities is acceptable and that flight crew response to RA's will not disrupt the normal functioning of the ATC system. The algorithms in TCAS II and III units distinguish between aircraft that are potential collision threats and those that are not. These algorithms predict the future position of the TCAS-equipped airplane and the future positions of proximate intruder aircraft. Alerts are generated only with respect to intruders that are predicted to be collision threats. However, for an RA to be generated, the intruder must be reporting the pressure altitude through its transponder.

It thus becomes necessary to consider more airspace where transponders and altitude encoders are required as the "price of admission" to that airspace. Otherwise, the very expensive TCAS equipment is virtually useless. It cannot detect nontransponder equipped aircraft, and it cannot issue manuever commands to the flight crew on nonaltitude reporting aircraft.

Finally, let me speak to one last concern. As regular users of the air space and airports, the continued full funding of the FAA's national air-space system plan is of vital importance to us. This is especially true considering that the delays and inefficiencies currently besetting the nation's air transportation system have adversely affected all who use the air space and pay user's taxes, including commercial airline passengers and general- and business-aviation operators.

Thus an important goal must be to provide a level of funding equal to the task of addressing these problems. As you are aware, the national air-space system plan designed to—designed to modernize the antiquated air-traffic control equipment currently in use is behind schedule. These schedule slippages are attributable to a variety of reasons, the most prevalent being the quite reasonable technical problems associated with a project with the ambition and magnitude of the NASP.

However, the vast majority of the programs which comprise the NASP are now ready to move forward, their technical and developmental problems having been largely overcome. Consequently, the NAS plan is reaching a critical phase of its lifespan. The FAA estimates that only 14 percent of all NAS plan projects will be completed in fiscal year 1987, while more than 70 percent of all major NASP projects have been contracted for, and about 90 percent of them are well underway.

Any shortfall in appropriations from the airport and airway trust fund for the NAS plan will result in additional delays in modernization of ATC equipment. In the meantime, that the trust fund's unobligated balance continues to grow is difficult to comprehend. The safety implications of the situation are obvious. Simply put, the longer the old, tired ATC hardware is left in place to help control the burgeoning air traffic, the more likely the system will suffer a catastrophic failure with frightful results.

At this time, I might go ahead and put forth my original intention to give you a plug for your bill, Mr. Chairman, but we think this vehicle will be a time for consideration of a reform of the entire ATC system in the FAA. Hopefully, improvements will result from that legislation in aiding all aspects of aviation safety including issues like those before us today.

Thank you again for the opportunity to speak, and I'll be glad to answer your questions.

Senator Ford. Thank you, Pete.

Webster.

STATEMENT OF WEBSTER B. TODD, SENIOR VICE PRESIDENT FOR GOVERNMENT AND TECHNICAL AFFAIRS, AIRCRAFT OWNERS AND PILOTS ASSOCIATION

Mr. Todd. Thank you. Mr. Chairman, Senators, AOPA today has submitted a statement for the record, and I would let that stand with the comment that some of the technical data contained therein—we will make ourselves available to you or your staff at an appropriate time to go through it in any way or detail that you wish.

You have already pointed out, Senator McCain, that one of the reasons why we believe what is at stake here is a process—whether you have an expansion of controlled air space in the Phoenix Valley, whether you have a TCA, whether you call it corridors—what you have to have is a process that provides for the input, legitimate input, of the user community, whether it's the 121 air-carrier community, the soaring community, the general-aviation community, the pleasure community, the business community, the professional community. It simply has to exist, and it does not exist today.

I suggest that the FAA is—Mr. Owens used the phrase a "straw man" in the NPRM procedure. In our experience over the years, the straw man is more of a Trojan horse. Every time one of these straw men has come down the road, it has been lined with steel. NPRM language has rarely been changed significantly if at all.

I go back to the original TCA NPRM. There were over 16,000 comments in that docket. Less than 2 percent of them favored the TCA. All of them had substantive recommendations, few of which were paid any attention to by the FAA in the implementation of the NPRM. Administrator McArtor in Los Angeles put himself on the record in a very, positive fashion by saying, that he believes that the time for user input is prior to the issuance of an NPRM. That process was used in responding to the SFAR 51 action that was taken in August, closing the corridor and lifting the top of the TCA.

I can't tell you what the ultimate result of that process is going to be because there's another month or so of charting work to be done. But I can tell you that members of the user community and members of the FAA work force, center facility managers, people that operated scopes in the TRACON, and the center in Los Angeles sat down and did their very best to exchange, on a substantive basis, concerns that would permit VFR transitioning through the Los Angeles area. And I just would like the committee to know that while the FAA is proud of the drop in NMAC's reported in the TCA in Los Angeles, the total number in the Los Angeles basin hasn't changed; they've just been shifted outside the TCA where AOPA said they were going to be shifted. And, in fact, recently there was a mid-air collision between two general-aviation aircraft that killed a father and the son between the TCA and the Burbank ARSA; I don't say that that was caused by the compression of VFR traffic along the Los Angeles River because the radar dump data isn't sufficiently clear to show exactly where it occurred, but those two airplanes wouldn't have been doing what they were doing had the TCA not been closed. I point out that I'm delighted that the FAA had some hearings after the special SFAR was implemented, but they took the step without even consulting their own people. They put in procedures where different controllers didn't know who they were supposed to talk to, and how traffic was to be handled. The air space had not been assigned by TRACON and, Senator, that is not responsible action. That is not using the user community. That is not providing a process whereby sensible decisions can be made.

And if there is anything that AOPA, on behalf of its 264,000 members nationally and 6,000 members in the State of Arizona, could urge this committee to do, it is to remind administrator McArtor of his words for a pre-rule-making substantive process and ask him to stand by that commitment and put that process in effect so that the needs of the user community, the knowledge that is represented by the user community, is accessed—in a manner and fashion where it can have some impact. I'm reminded somewhat of the quote of Samuel Goldwin which I will just paraphrase, where he said that to succeed in movies is the same as succeeding in government service; you need two qualities: honesty and sincerity. As soon as you learn to fake both of those, you'll have a great career.

I suspect that some of what you've seen here as paying lip service to a process is just that. In the four hearings that were held in the Los Angeles area on the Los Angeles TCA modification, some 4,000 people attended and several hundred spoke. But they were informal hearings on an NPRM. There is no record. Those people came, they spoke. They think their input was taken seriously. But there is no formal record so it was basically a "feel good." So I would ask, from our point of view, not that this committee get into a great deal of technical detail, but that you use this opportunity to keep the FAA in line with the process that will have results that address the questions of safety and flexibility and utilization of air space. Thank you very much.

[The statement follows:]

Statement of Webster B. Todd, Jr.
Senior Vice President, Government and Technical Affairs
Aircraft Owners and Pilots Association

I am Dan Todd, Senior Vice President of Government and Technical Affairs for the Aircraft Owners and Pilots Association (AOPA). As a pilot, I have flown into the Phoenix area airports, including Sky Harbor International. I appreciate the opportunity to present the views of our membership, 6,000 of whom reside in Arizona.

AOPA represents the national aviation interests of 264,000 aircraft owners and pilots who fly general aviation aircraft for business and personal transportation. General aviation is a true cross-section of the aviation community and, as the operator of 98 percent of all registered civil aircraft, is a major beneficiary of safety improvements. We are committed to achieving the safest possible airspace system with capacity and access for all users. We believe the system must be designed and based on the legitimate needs of the user and not for the convenience of the FAA managers operating the system.

General Aviation Safety

Mr. Chairman, it is important to note before this first hearing of 1988 on our nation's airspace that recently released NTSB preliminary accident data for 1987 documents the fifth consecutive year of a thirty-year span of declining general aviation accident rates. In fact, the total number of general aviation accidents is the lowest reported since 1939, the year AOPA was founded. In addition, the accident rates per 100,000 hours for fatal general aviation accidents are at the lowest levels ever recorded by the federal government.

Since 1939, the general aviation accident rate per 100,000 hours has plummeted from 126 to 8.25, and the fatal accident rate has declined more than 820% from 12 to 1.45. Clearly general aviation flight operations are safer today than at any time in history, and the trend is continuing. However, AOPA recognizes that improvements in this record are desirable and must be pursued vigorously. We believe three areas are foremost:

1. Weather reporting, availability and accuracy--is critical since year after year 40-50% of all accidents have weather as a contributing cause/factor.

2. Pilot training--especially in the area of decision-making and cockpit teamwork.

3. Redesign of our ATC system which makes it comprehensible and usable for all pilots.

The consistently improving safety record is primarily attributable to the specific actions of individual pilots and the technology aircraft design advances that have occurred in the field of aerodynamics. Today's pilots are far better trained than their 1939 counterparts, and our aircraft are now aerodynamically designed for safety.

It is important to acknowledge these facts at a time when the FAA is continuing to advance the "myth" that it is government regulations that have "controlled aviation" and therefore generated increasing levels of safety. In reality, it is private-sector technology and initiative that have improved our nation's aviation safety record. The FAA is not an organization that operates on the cutting edge of technology. The best examples of this are evident in the National Airspace System Plan and the FAA's use of a private contractor for Systems Engineering and Integration. Ultimately, FAA regulations follow and merely formalize advances made in the private sector.

A National Aviation Policy

This pattern of following and formalization of private-sector initiative is an incremental form of management and has no strategic value. It clearly does not meet the definition of a "plan or policy." The FAA's reactionary, incremental actions on airspace design proposals merely amount to a band-aid approach that can only address small deficiencies in the basic system and will never successfully address the basic disease. Our national airspace system is suffering from a disease brought on by the lack of a national aviation policy. Congress did not create this problem, but it may have to be the physician that cures FAA of its afflictions.

In establishing DOT, Congress specified that the agency was to devise and coordinate overall transportation policy for all modes of transportation. Section 312 of the Federal Aviation Act of 1958 directs FAA "...to make long-range plans for and formulate policy with respect to the orderly development and use of the navigable airspace..." There has been no such activity on the part of DOT. Development of a national policy or plan was a natural priority for this Cabinet-level department.

The failure of the Department to address its mission to develop a national aviation policy in favor of short-term micromanagement of FAA professionals is particularly onerous as we experience daily system failures.

Where is the long-range planning for airport and airspace development? And where is the strong public advocacy necessary to make it happen? Where are the leadership and vision to devise a coherent statement of airport and airway access?

Where is the planning to address the needs of all aviation users, the public priorities, access to the system, both scheduled and on demand? And where is the cohesive and consistent management effort required to deliver a system which meets all users' needs?

The void created by the absence of a national policy results in FAA's responding with bureaucratic remedies that are essentially "daily band-aids." There is little understanding of overall aviation goals and objectives and certainly no sensitivity to primary user needs.

General aviation's needs are simple and direct. The pilots we represent have repeatedly defined their expectations for a national aviation policy.

- o They insist on equal access to a system that has sufficient capacity for all users. (Section 104, Federal Aviation Act of 1958, "There is hereby recognized and declared to exist in behalf of any citizen of the United States a public right of freedom of transit through the navigable airspace.")

- They recognize regulations as a code of conduct but expect regulation to be understandable and supported by fact--not oblique and based on opinion. (Section 103(a), Federal Aviation Act of 1958, "...the Secretary of Transportation shall consider...as being in the public interest:...The regulation of air commerce in such manner as to best promote its development and safety...")

- They expect an air traffic system that is safe, efficient and designed on sound practices that are presented simply. (Section 103(c), Federal Aviation Act of 1958, "...the Secretary of Transportation shall consider...as being in the public interest:...the regulation of both civil and military operations in such airspace in the interest of the safety and efficiency of both...")

- Above all, they demand and deserve a commitment from the public administrators of the user-paid-for system, to correct deficiencies in any facet of the system that is identified by those who operate in, depend on, and actually analyze the system through continous use. (Section 103(b), Federal Aviation Act of 1958, "...the Secretary of Transportation shall consider...as being in the public interest:...The promotion, encouragement, and development of civil aeronautics...")

Airspace Redesign

For today, let me concentrate on airspace redesign. What the pilot is currently faced with is a hodgepodge system that is not only unresponsive to user needs and safety but which is, frankly, overly complex, incomprehensible and therefore dangerous in its ambiguity.

Let me show you a few slides to illustrate my point.

More airspace rules and regulations will not make aviation safer; however, a redesign and simplification of terminal airspace will. We believe the forthcoming "Super TCA" and Phoenix TCA proposal with expanded large blocks of controlled airspace has been developed without regard to user need or an assessment of the ability of the air traffic control system itself to accommodate the active control of more aircraft. FAA-proposed rule changes are ill-conceived, further complicate today's overly complex system and ignore the fact that increased levels of control within existing airspace design result in a requirement for more controlling resources or a reduction in service. In our experience, the result is less service and decreased access which we will never accept as a national goal.

The Commitment to the "Clean-Sheet" Approach

As a result of the controversy surrounding the Los Angeles TCA SFAR that brought more control, and therefore less service and access to the Los Angeles airspace, Administrator McArtor committed to a re-evaluation of terminal airspace with user input before any regulatory actions were proposed. We must put an end to the piling of one band-aid on top of another and finally start with a clean-sheet-of-paper approach to terminal airspace redesign. This commitment known as the "STAR" process, was made in November of 1987. While we are waiting for the Administrator to convene the first meeting with industry and users, AOPA has already proposed a redesign of terminal airspace that will add safety and capacity to terminal airspace. Our Transition Corridor Concept was submitted to the FAA Adminstrator one year ago and has repeatedly been advanced by other user groups as a design proposal that must be applied and evaluated. We believe that Phoenix airspace, if proposed for modification, is ideally suited to an evaluation of our proposal.

The concept is intended as a redesign of existing terminal airspace, including TCAs and some ARSAs, and will provide sanitized airspace from high-level enroute cruise to the runway. It is a passively safe system that all users can benefit from. TCAs are characterized by a relatively high density of traffic and a varied mix of aircraft ranging from high-performance, passenger-carrying jets through lower-performance, piston-engine aircraft to limited-use utility vehicles such as helicopters.

During the 1970s, the Terminal Control Area concept was developed to provide access for all users to high-density "in-demand" airspace around large urban areas. At that time, the terminal area traffic was less dense, and as a result, traffic flows were far less structured than they are in today's deregulated airline environment. With less structured flow and a lower density of traffic, the current Terminal Control Area design, resembling a "standard upside-down wedding cake," was an efficient use of airspace since it could accommodate relatively random arrivals and departures by all users.

However, the 1980s and deregulation of the airlines increased traffic density and volume in metropolitan areas, largely due to the airline hub-and-spoke system. In response, the FAA initiated a broad range of traffic management programs to "control" the increasing demand in terminal areas. These programs include a central flow control planning process, standard arrival and departure routings, ground delays or gate holding, and specific East and West Coast plans. These actions have resulted in an air traffic environment that is highly structured with predictable flows and which is capacity-saturated. Today our air traffic system is characterized by predictable airspace utilization along fixed, predetermined routes. The 1970s pattern of random terminal arrivals and departures is impractical and inefficient in our capacity-strained system. The original Terminal Control Area design has been overtaken by time and traffic demands. TCAs are no longer the most efficient use of busy airspace. Any proposal to modify or enlarge TCAs will increase the current levels of inefficiency and become another band-aid on a basic design affliction that needs a comprehensive cure.

The FAA must ensure the separation of passenger-carrying air transport aircraft from other legitimate users of terminal airspace. However, FAA has failed to recognize that in the current, highly structured environment, the best method to ensure separation and provide needed capacity that meets traffic demands is to "control" and "sanitize" in the simplest manner only that airspace along high-density, predictable air traffic flows. In its incremental efforts to manage increasing levels of traffic, the FAA has not released control of terminal airspace segments which are in current terminal control areas but are now outside the high-density, structured flow. As a result, the FAA is currently attempting to "control" more airspace than is necessary for safety or efficiency. This has given rise to severe scheduled traffic delays and air traffic controller staffing shortages and has denied access to legitimate users.

Our Transition Corridor proposal recognizes the Terminal Control Area airspace segments that are outside today's highly structured arrival and departure routings and removes that airspace from active air traffic control. However, the Transition Corridor design also recognizes those areas of the terminal control areas that are more in demand and provides a greater separation assurance to protect scheduled airline aircraft.

The Transition Corridor proposal is an airspace design evolution that enhances safety by increasing the assurance of traffic separation while at the same time reducing the volume of airspace over which ATC must exercise control.

Transition Corridors should be instituted through a two-step process by the FAA. A flight track processing analysis will provide graphic airspace utilization plots through the use of ARTS tapes at air traffic facilities. This analysis will describe the standard, predictable structured flow areas to be included in the Transition Corridor. Naturally, this data will also identify the current Terminal Control Area airspace that is not being used effectively.

Following the flight track analysis, a site-specific analysis would be performed to define the corridor area. The factors considered in the analysis should be:

- pavement design (existing & future)
- radar coverage
- topographical constraints
- noise abatement concerns
- major traffic flows (terminal & enroute)
- NAVAID locations
- approach and landing aides at primary airport
- complexity of the operation
- adjacent special-use airspace
- special traffic management programs
- location of VFR checkpoints and ground reference points
- availabilty and future use of MLS procedures
- airport acceptance rates
- mix of operation (GA vs air carrier and props vs turboprops vs jets)
- locations and number of reliever/satellite airports

The site-specific evaluation would have to include a computer-generated map of flight paths for all aircraft using the airspace. The actual flight track data can be easily obtained from ARTS III tapes and simulated on the FAA's computer (PDP1-11) to re-establish a daily, weekly, or monthly account of the operations at the airport, incorporating various directional flows (N/S/E/W). The plotted flight tracks would clearly depict high activity routes (which could be plotted on a VFR sectional to identify areas where VFR checkpoints or reference points could be used to designate airspace confines) as well as identify areas of controlled airspace that are not being effectively managed and could be returned to an uncontrolled status.

Let me show you a few graphics on how this might look in Phoenix.

Advantages of the Transition Corridor Concept

(a) Reduces the potential for midair collisions between high-performance airline passenger-carrying aircraft and slower aircraft in operation around specified high-density airports in congested terminal areas.

(b) Provides standard arrival and departure areas in which positive separation between all aircraft can be assured with simplification of airspace design.

(c) Enables high-performance aircraft to be operated at their optimum efficiency on pre-planned routes.

(d) Enables arrival delays for high-performance airline aircraft to be absorbed at high altitude or on the ground at the least expense.

(e) Reduces large areas of airspace in the vicinity of airports that are required by current TCA configuration.

(f) Reduces controller and pilot workload.

(g) Provides safer airspace outside the standard TCA in which other aircraft can be operated without undue delay, excessive control or compression.

(h) Enhances understanding and charting of terminal airspace, which results in a greater ability to avoid the airspace by non-participating aircraft.

(i) Improves and expands the use of SIDs and STARs as well as provides for stabilized operations in terminal areas which are the key ingredients to enhanced safety.

The National Airspace Review Enhanced (NARE) program has been in place for one year. This group was formed at the request of the FAA, and its membership is comprised of the entire aviation industry. One subcommittee focused on the airspace and air traffic control problems. The following draft report excerpt from this group clearly illustrates the collective industry position.

> "The existing high-density terminal area design is hindering capacity improvements for both air carrier and general aviation. This unintentional evolution has been created by the current methodology of the FAA in its airspace design.
>
> These designs were to protect the air carriers and have done a commendable job of protecting those passengers. However, it has become apparent that all other users have suffered as a result.
>
> The basic flaws in the design are:
>
> 1. Each addition or redesign has not fully included other types of existing airspace (ATA, TRSA, ARSA, TCA, SUA, NAVAIDs, SIDs, STARs) or local unique geography.
>
> 2. Existing airspace controlled by the centers and TRACON need to be reconfigured so they match traffic flows both IFR and VFR. Profile descents should be included.
>
> 3. Safety of all users in the terminal areas needs to be fully considered.
>
> 4. Consideration must be given to the access needs by all categories of users."

AOPA recommends that the FAA address these critical issues identified by industry prior to implementing any proposed new airspace design in the Phoenix area. These four critical issues were unanimously agreed to by all NARE members.

Summary

The void created by the lack of a national policy on airspace capacity and access has permitted the FAA to embark on an incremental "band-aid" approach to airspace management. FAA's belief that more government airspace regulations will result in safety improvements is a myth. Our current airspace system, especially in terminal areas, is overly complex due to FAA band-aid regulations that ignore the necessity for procedures that are simple, increase capacity and are understood by all users.

FAA must take a "clean-sheet-of-paper" approach to airspace redesign. Our proposal to correct the decreasing access and service that characterize current terminal airspace is based on a corridor arrival and departure concept. We have proposed the transition corridor to the FAA as a part of the Los Angeles TCA review and believe it should be evaluated for national implementation.

The corridor concept recognizes existing highly structured, predictable traffic flows in high-density terminal areas and builds a protective "controlled" corridor around those aircraft. Other traffic outside the corridor would not be actively controlled but could easily avoid the corridors at large airports.

The benefits of a corridor concept include a simple airspace design that provides greater separation assurance, a reduced volume of "controlled" airspace, a reduction in controller workload, standard arrival and departure routes that are charted, and a reduction in the potential for near midair collisions.

Senator FORD. Captain Russell.

STATEMENT OF CAPT. RICHARD RUSSELL, UNITED AIRLINES, INC., ON BEHALF OF THE AIRLINE PILOTS ASSOCIATION

Mr. RUSSELL. Good morning, Senator.

I'm Captain Richard Russell, Los Angeles area safety coordinator of the Airline Pilots Association. ALPA represents over 40,000 pilots who fly for 43 airlines. Area safety coordinators are all line pilots who fly full schedules for airlines and voluntarily serve as ALPA's liaison representatives with FAA regional offices, airport authorities, and air-traffic control facilities. We coordinate ALPA safety activities within specific geographic areas, drawing on our daily experiences of flying throughout the air-traffic control system. My area of responsibility includes Southern California, Southern Nevada, and Arizona.

I appreciate the opportunity to appear before you today to express the association's views on the safety of aviation operations in areas of increasingly congested air space. In particular, I will address the FAA's terminal control area program.

The Airline Pilots Association supports the recent notice of proposed rule-making, NPRM, for terminal control areas which proposes establishing a single-class TCA and revises the associated pilot and equipment requirements. A copy of our comments responding to that NPRM is attached to my statement for the record.[1] The proposed TCA design furthers the goal of providing positive control air space around the system's busiest airports and thus affords a higher degree of protection for the traveling public.

It should be noted that this NPRM is the direct result of work of a national air-space-review task group and the FAA/TCA-review task group, both of which concluded that the continued existence of the TCA's was necessary and that the TCA program remains a valid part of the overall safety program.

The need to positively control aircraft in and around congested terminal areas was reinforced by Congress when it recently passed the Airport and Airway Safety and Capacity Expansion Act of 1987.

This act clearly supported the FAA's efforts at improving safety by requiring the FAA administrator to promulgate a final rule requiring the installation and use of operating transponders with automatic altitude reporting capability in all terminal areas, not just TCA's, where radar service is provided. The use of altitude encoders is an integral part of improving safety because of the vital altitude information it provides to the controller.

While this legislation is welcomed, a welcome first step, we strongly support the requirement for all aircraft to have and use altitude encoders when operating in any terminal environment served by air-carrier aircraft. Within a few years, all air carriers will be required to have traffic-alert and collision-avoidance systems, TCAS, which will greatly increase the pilot's ability to avoid threat aircraft. The true effectiveness of TCAS, however, depends on all aircraft being equipped with and using altitude-encoding transponders. The greatest return on investment for TCAS is enhanced safety for the traveling public, and this will only be realized if there is a more extensive mandatory Mode C equipment regulation.

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[1] The attachments were not reproducible.

As relates to TCA design, we recognize that local modifications to the standard design may be required because of geographic features and to allow the ingress and egress of aircraft to secondary airports within the TCA. I'd like to stress the importance of designing the TCA by first starting with the single-class TCA dimensions and allowing changes to accommodate a particular location only after establishing a strong operational basis for change. The FAA should strive for standardization and simplification to the greatest extent possible.

The single-class TCAS design provides the necessary flexibility for general-aviation pilots which in turn enables air-traffic controllers to handle a greater variety of traffic mix without suffering a drastic loss of capacity. It reduces the possibility of inadvertent TCA intrusions by nonparticipating aircraft. Any fragmentation of the design, such as terminal corridors, would result in a reduced air-traffic control capability to maintain an efficient flow of air traffic and would not provide the air space necessary to effectively and efficiently satisfy the need for vectoring because of weather, sequencing, and metering restrictions. Most certainly the use of terminal corridors alone would result in a drop in the capacity for terminal areas because of the different performance characteristics of the various aircraft that would be using the corridors.

We see no reason that the design of the Phoenix TCA should deviate from the proposed standard. Of course, there should be a systems approach to the design of each TCA, and it may be necessary to include other airports in the area whose operations have a direct impact on the flight operations to and from the primary airport. One of the difficulties in designing a TCA for Phoenix is the lack of a navigational aid on the airport. Sky Harbor Airport must be equipped with a VOR/DME or VORTAC facility. It is imperative that the TCA air space be defined by radials and DME distances from a NAVAID on the airport. Prominent landmarks must be charted to assist in visual navigation around the air space. This is essential so that pilots can accurately navigate in, around, and/or clear of the TCA. To chart a TCA based on the existing NAVAID is not operationally sound.

It is important to remember that commensurate with establishing TCA's comes the requirement for the FAA to furnish the equipment and personnel to provide the ATC service that is inherent in a TCA operation. Establishing a TCA increases the responsibilities of the controllers. The workload increases, and resources must be in place to provide the services that the TCA concept envisions. The need for more ATC personnel and equipment must be recognized by the FAA and Congress. Increasing the level of safety through the TCA concept has a direct operational cost, and commitment to providing the resources is essential.

In summary, the TCA program significantly increases safety in terminal areas, and Phoenix should have a TCA. I am confident the FAA will strongly consider the ideas that I have presented today as they go through the design process. Thank you for the opportunity to make this presentation, Mr. Chairman. This concludes my prepared testimony, and I would be happy to answer any questions that you may have.

Senator FORD. Thank you, Captain.

Mr. Swanda.

STATEMENT OF RONALD L. SWANDA, MANAGER, SYSTEMS OPERATIONS, GENERAL AVIATION MANUFACTURERS ASSOCIATION

Mr. SWANDA. I might ask that my statement be included in the record.

Senator FORD. Your statement will be included in the record as if given, and you may highlight it.

Mr. SWANDA. Thank you. I represent the General Aviation Manufacturers Association, GAMA. GAMA represents the manufacturers of general aviation and aircraft avionics, and one of our members is a commercial flight-systems division here in Phoenix which makes some of the division transponders, including Mode C and the traffic-alert and collision-avoidance systems, and I'll answer questions, if you have any, on that equipment.

First of all, let me point out three things that we believe at GAMA are the key to making the air space in our country safer. The first one is increased use of Mode C transponders; the second, use by the airlines of the traffic-alert and collision-avoidance system; and, last, and one that has not been mentioned today, is the fact that the FAA must increase the amount of ground-based equipment necessary to take charge of this increased transponder use, in particular, the automatic conflict-alert capabilities. The third thing is: Should there be a TCA in Phoenix? There is a key question. Obviously, I think the way to answer that question comes from the fact that as the space gets more and more congested, we have to come to the point where we cannot allow unauthorized aircraft to enter that air space. The price for aircraft not entering that air space has to go up. That price may be increased transponder use; it may be increased pilot qualifications. In any case, this does not exclude users of the air space. We believe that a TCA, if one is placed in the Phoenix area, can be designed to provide adequate separation between the air flights and all other traffic.

We think that the TCA system works today. Except for the tragic Cerritos accident, there's never been a mid-air collision in a TCA across the country. The VFR corridor concept, which is kind of the opposite of what has been suggested by other people today, we think is a viable one. I look forward to answering your questions.

[The statement follows:]

STATEMENT OF D. LARRY MOORE, GENERAL AVIATION MANUFACTURERS ASSOCIATION

Good morning, Mr. Chairman. I am Larry Moore, Group Vice President of Honeywell's Sperry Commercial Flight Systems Group. We manufacture a wide range of aircraft guidance, control and avionics equipment for both commercial and general aviation at our facilities here in Phoenix, including aircraft transponders and Traffic Alert and Collision Avoidance Systems. I represent my company on the Board of Directors of the General Aviation Manufacturers Association (GAMA), and I chair the GAMA Airport/Airway and Operations Committee. I am pleased to be able to welcome you to Phoenix and to talk about general aviation safety—our industry's top priority.

Earlier this month, the National Transportation Safety Board (NTSB) released its 1987 accident statistics. We were most gratified to note that the long trend of improving general aviation safety continued through last year, and established the lowest accident rates ever! These included the fewest accidents, fewest fatal accidents and fewest fatalities on record—something about which we can all be proud, but certainly not complacent. We remain committed to safety in aircraft design, equipment and pilot proficiency.

Pilot training is paramount in discussing safety. The FAA tightened training requirements in the 1970s, and this has contributed to our improving safety record. Moreover, nearly half of all licensed pilots have earned their instrument rating while more than one in four has a commercial pilot license. Consequently, the pilot population is better trained today than ever before.

In the past several months, GAMA has developed a safety-oriented proposal we have named Type-Specific Training. This proposal would establish a syllabus for training licensed pilots in aircraft models they have never flown. The syllabus would apply to turboprop aircraft, and to complex and high performance piston engine-powered aircraft. This master syllabus would be approved by the FAA and published as a GAMA specification that any qualified trainer—including an instructor pilot, training facility, or an FBO—could use to develop a training course. This effort has received enthusiastic support and cooperation from all GAMA companies and we think it can make a major contribution to safety.

Our general aviation aircraft are well-equipped, too. The majority of them have all the communications and navigation equipment required to operate within the air traffic control system. Those not so-equipped are largely special purpose aircraft, such as crop dusters or aircraft that operate primarily in remote areas, that do not require this equipment.

The increased use of altitude reporting equipment holds great promise in helping to avoid mid-air collisions. Transponders are found on approximately 75 percent of the general aviation fleet while 45 percent have Mode C altitude encoders. Sales of both are increasing: transponder sales increased from 5,040 in 1986 to 6,200 in 1987; altitude encoder sales jumped from 6,500 to 13,200 in the past year. Moreover, we foresee no production problems in meeting the demand for new transponders anticipated from the Congressionally-mandated use of Mode-C in radar-controlled airspace. To capitalize on the widespread availability of this new capability, however, the FAA must expeditiously upgrade its ground-based equipment to provide automatic "conflict alert" capabilities.

We are also enthusiastic about the increased level of safety that an airline fleet fully equipped with the Traffic Alert and Collision Avoidance System (TCAS) can bring. This is not a system undergoing research and development; it is a system that has already been installed on selected airline aircraft, and is in limited use today. The most beneficial aspect of TCAS is that aircraft equipped with it will not only get automatic collision avoidance directions away from other TCAS equipped aircraft, but away from any aircraft that has a Mode C transponder as well. One might say that installing Mode C in a general aviation aircraft connects that aircraft to the TCAS system of every equipped airliner. The combination of mandatory airline TCAS, more Mode C equipage in general aviation, and upgrades to the FAA's ground-based equipment could greatly enhance the safety of our ATC system.

We have several fine general aviation airports here in the Phoenix valley. The primary ones are Glendale, Falcon Field, Deer Valley, Goodyear and Scottsdale and Chandler. Together, these airports are home for over half of all the general aviation aircraft in Arizona. They handle 80 percent more traffic per year than does Phoenix Sky Haror International Airport.

It is essential that any change to the airspace structure around Phoenix take into account the importance of these general aviation airports to the citizens of Phoenix, and to the national air transportation system.

If a TCA is proposed for Phoenix, the design of that TCA should allow access to these important general aviation airports without requiring all small aircraft to pass through the TCA. Likewise, the TCA design should allow small aircraft to transit the Phoenix area without entering the TCA, but also without requiring the aircraft to detour outside a 30 mile radius of Phoenix Sky Harbor International Airport. Proposals for corridor concepts to accommodate small aircraft have been developed by other interested parties who will be speaking today. In all other areas, however, out to 30 miles from Phoenix International, Mode C transponders should be mandatory, regardless of whether the aircraft is in the TCA.

The cost of upgrading an existing transponder with Mode C is only $600–$900 per aircraft. The cost of installing a basic transponder and Mode C is only $2,000–$3,000. Aircraft owners who install this equipment are buying better collision protection, especially when the air carriers equip with TCAS. Since these transponders have an average life of at least 10 years, the annual cost of this collision protection is $60–$300 per year. It is one of the wisest investments a pilot can make.

No discussion of general aviation would be complete without addressing the enormous problem that threatens the industry's very survival: product liability. Despite general aviation's continually improving safety record, product liability costs to the industry have driven our annual production numbers down from over 17,000 units to 1,085 in the past ten years. The Senate is considering a general aviation product liability bill—S. 473—which would restore some fairness to the aviation tort picture. It is enthusiastically supported by manufacturers and users alike. I would like to express our sincere appreciation to Senators Ford and McCain for your support. We very much need this legislation.

In conclusion, Mr. Chairman, we are proud of the continuing improvements made in general aviation safety, and of the lower accident rates that have resulted. We are committed to bringing them even lower.

Senator FORD. Thank you, sir.

Mr. Sanderson.

STATEMENT OF LARRY SANDERSON, EXECUTIVE DIRECTOR, SOARING SOCIETY OF AMERICA

Mr. SANDERSON. I must leave Senator Ford with a comment. I was appreciative of your earlier remarks this morning about Kentucky and the fine traditions you've developed there. I am a poor Iowa boy. Iowa is pretty these days, but I was thinking about reapplying for citizenship in Kentucky based on some of the things you talked about this morning.

Senator FORD. Well, Iowa has something that helps; they have a little corn.

Mr. SANDERSON. That's true, but we also have healthy skepticism, and I must admit, after listening to a number of the speakers in this hearing today, I'm reminded of the skepticism of my parents who tell me, "Beware, son, of anyone who puts his arm around your shoulder and says, 'Don't worry; it's going to be all right.' "

I appreciated Senator McCain's comments earlier and, not to be contentious; but I'm sorry, what you saw earlier today in terms of some testimony on the part of officials in the rule-making process and then their departure; you personally experienced what we've lived with for years, and that's called a show. We were referred to this morning as customers, and, where I come from, that means we have a right to make a decision about whether or not we're buying. And if we don't buy what they're selling, there isn't any place else to go. So I don't know whether it's the relationship it's supposed to be.

Senator FORD. We call it, back in Kentucky, captive shipper.

Mr. SANDERSON. Senators, for 56 years, our society—and I'm talking about the Soaring Society of America—has conducted flight activities with a goal of producing responsible, cooperative, safe users of the air space. We are not reactionaries fighting change; quite the contrary. I'm not going to worry you with numbers or mounds of data today. Rather, I'm going to concentrate on some simple, direct statements that I hope you will accept for what they are: A very simple plea that you and others in responsible positions will stop and slow down this juggernaut or at least help us institute a system whereby users are allowed meaningful input to the written rulemaking process. We've heard a lot about that privilege and the fact it works. But, once things are on paper, they tend not to change, and we have hundreds upon hundreds of examples of that throughout this country. And I'm sorry my folks suffer the most in this process because we're smaller, and we're easier to push around.

As I make my statements, please don't picture us as pilots of cute, little rickety machines like Waldo Pepper's without an engine. They can cost $50,000 and reach speeds near 150 miles per hour. Some years ago, a young man flew over this city on his way to setting a U.S. national distance record of 904 miles. His 11-hour flight from California to Texas was achieved at speeds approaching 80 miles an hour on the average.

The FAA has set the goal of providing safety for all responsible users. As part of this program, we have the expansion of ARSA's, TCA's, PCA's; and we'll use the initials because that's pretty much all they ever use on us.

The reality as it applies to gliders:

One, the technology is not available as represented.

Second, even if it was, the ground technology software is not ready to handle us. I can give you the specific example of a man who tried to operate in controlled air space. He was denied passage through: Quote, the computer cannot handle your transition speed, close quote.

Third in the basic assumption of positive control is to shift responsibility from private pilots to the ground.

Let's talk about that responsibility. We are going to shift positive control away from the pilots to an individual on the ground. A flight era is now dead. The pilot and the pilot alone is capable of keeping that plane aloft.

We are not against the concept of identification. We are not against the judicious application of controlled air space with the purpose of defining an established area of operation. What we are against is the arbitrary application of these restrictions by a system that is—that is not acknowledging user input in any meaningful fashion.

I've been involved in government and politics most of my life, professional life. And you've seen it and I've seen it, as has everybody here; it's an age-old formula. There is a problem. The public has developed a negative perception of this and wants action. The response is to develop a standardized solution that solves the known problems, the future problems, and any possible scenarios far, far distant in the future. We strongly object when the end result of reasonable regulations and legislation is to unreasonably deny legitimate users who, first, have demonstrated a long history of safe participation; second, are seeking to support development of technologies that are available for us to participate in new controlled air space; and, third, we state over and over a willingness to cooperate reasonably. I've been talking about the system as a whole. How about right here in Phoenix, Senators?

Senator McCain and Senator DeConcini, we have three glider operations in Phoenix that will not be able to operate if the FAA's go in as proposed. These are small businesses built by men and women who have dedicated themselves to building a successful operation. They do what they have to; move or shut down. However small, these operations are part of the economic strata of Phoenix.

We know that Phoenix needs controls. That's why we support the corridor concept.

Geographic Television broadcast on March 6. However small, these operations are part of the economic fabric of Phoenix.

We know that phoenix needs controls. That's why we support the corridor concept.

Nationwide we have 70 more sites affected by the specific TCA proposals. Over 70 percent soaring will be affected and 100 percent if these discussions of a 6,000 foot floor are introduced.

Rules are being proposed which deny us the opportunity to participate in the airspace. What's more, these rules are being proposed in a manner that denies us the opportunity to comment in the formative stages of planning.

It's the old pendulum—when something swings too far, it inevitably returns. I am confident that if this overkill is allowed to go unchecked that in 5 to 7 years we will see rational heads prevail and the system will right itself.

But Senators, in the meantime, soaring is locked out.

And that is a sad epitaph for a sport that can boast that the Wright's stayed aloft longer in their glider than in their engined craft in 1903.

Senator Ford. I was soaring with you for a minute. But I admire what you do.

Let me thank you all. I'm going to have to leave—and I regret it, but this is the way things are—to make another meeting tonight. I promise you just one thing: That the testimony we've received today will have its place in the decision-making process. We hope that it won't take five to seven years to turn things around, Mr. Sanderson. You've got two fellows up here from your state that understand you can't get it all overnight. But you can start pecking away. So I'm grateful for your hospitality and your courtesy this morning, and I assure you that we're going to make every effort to accommodate your desires.

There's no way to make everybody happy. Dad said one time—and my dad's been pretty smart. I'm now 63, and he's been gone a long time. But the older I get, the smarter he becomes. He said one time that if you have two groups of people in a room, one side is just as dedicated to a proposal as they can be and one on the other side of the room just as dedicated as they can be but 180 degrees from those on the other side of the room, if you make a decision that doesn't satisfy either side, you've probably made one for the public, but you'll lose the next election. But we're going to do the best we can to take care of everybody. And I do thank you, and I apologize. Senator McCain will take over, and there are some questions that he'll have.

I thank you, Dennis. Good to be with you.

Senator McCain. We're very grateful, Mr. Chairman, that you would take the time from your very busy schedule to be with us, and we hope that you land safely at your next destination with your luggage.

Senator Ford. I'm going to carry it with me.

Senator McCain. I'd also like to take this opportunity to recognize Colonel Bill Sherer, who you're passing on the way out, for his hospitality in providing these facilities for us. Thank you very much.

Also, after these questions that we will have for the witnesses, I'd like to take a little time to do something which we try to do in these hearings, and that is to give some of the people who have sat there through these hours of testimony an opportunity to state their views. And, since it's an open hearing, the rules of this particular exercise are we'll give you two minutes; and I will try, of course, to allow you to finish your thought or your sentence at the end of two minutes. But at least that will give you an opportunity to make a statement on your feelings on this issue for the [illegible]. So after we finish with this panel, if you'll just line up over here, and we will try and listen to as many as we can.

Thank you to the panelists for your testimony.

Pete, I thank you very much. In your testimony, you state that you've never been opposed to the designation of a TCA or the requirement to install additional equipment, provided the FAA has the ground-based equipment and the staffing in place. This is one reason we have been supportive of FAA's recent efforts at designing routes or corridors through TCA's to accommodate VFR traffic.

That's news to me.

Mr. **West**. It was news to me, and that's why I pulled out "FAA" and said "the efforts." And I guess the efforts were really coming from the users groups and not necessarily the FAA.

Senator **McCain**. I see.

Mr. **West**. So you're reading my testimony that I put in the record and not the summary, so I apologize for the misquote.

Senator **McCain**. I see. You do not have information on FAA?

Mr. **West**. I personally do not have information about FAA's. I do know that the FAA has expressed to your technical operations people a willingness to discuss all aspects of the TCA, including corridors. And, like I said, we're confident that whether they do it on their own impetus or because of this Subcommittee, I imagine they will be listening to us after this Subcommittee.

Senator **McCain**. Thank you.

Mr. Todd, in your statement, I think your major thrust is one that I'm certainly in agreement with, and that's input at the right time rather than after the decisions are made. Would you agree with Senator Todd's proposal that we could set up some kind of a formal board that would be part of this decision-making process?

Mr. **Todd**. I think that what Alan McArtor had in mind when he made his statement relative to Los Angeles, it envisions that kind of a structure, but not in a national sense; in the sense that, if you have a problem in Phoenix, you get together—there are half a dozen national major players. There are half a dozen major local players. Those are the people that are needed. If you will, you were to set up a broad national standard at the Washington level, you would lose the ability to access the kind of expertise and daily operating—utility information that you get by having this kind of a hearing and getting this kind of witness on the record. So I think if—You know, I don't know what the subtlety, Doug, is of—when you were up here, you had a nicely printed name plate, and mine is kind of scratched out on the back of a newspaper. I get the message. But as long as it takes cognizance of the local expertise, it's available and very needed in these kinds of discussions.

Senator McCain. Thank you.

Captain Russell, your testimony about the feasibility of corridors is obviously at extreme variance from some of the other witnesses that we have heard, including a couple sitting right near you. Perhaps, for the record, you could elaborate and tell us why you are so firmly convinced that VFR corridors are not a viable option.

Mr. Russell. We're not talking about VFR corridors. They were talking about the corridor concept of a TCA, per se.

Senator McCain. Well, then, could I stop you? Are you in disagreement with VFR corridors?

Mr. Russell. No. In fact, ALPA supported, as I did also, supported the VFR corridor concept in the Los Angeles area. Unfortunately, they have made an unreasonable demand, that is the one off shore which every airplane has to tunnel out under; I think that this is unsatisfactory and should not even be considered. But the other two we support fully, and it—we are ready and willing to work with the other users in the design of this particular TRACON.

And I wanted to also note that the union fellow from the local controller there was very evasive about answering about staffing. And then Mr. Miller did say six additional people. Now he's talking about them coming on board in August. You also must realize that it takes at least four years to train a controller. In Los Angeles we have trained quite a great number of controllers. They are still over there working six days a week. That's four days off per month, four days per month that they have off. You're going to get controller burn-out. A big reason is, as soon as they get them trained, they move them out. This is not fair to them, and they're really overworking them.

And as far as having input before the fact, an example is the flipper departure that they foisted on all departures out of Los Angeles this last year and without user input. We found out that the departure that we started using required seven frequency changes within the first 23 miles of flight, a time when the pilot is most busy in the cockpit. That and, plus, looking at the same time. We got this stopped only after interceding, not with the regional office, but through Washington; we got it shot down, and then they took our recommendations. But once it's in place, it's almost impossible to change it. I've been doing pilot representation work for better than 25 years, 19 years of it in the air safety end of it. And it has made our job increasingly more difficult to have this procedure after the fact. And, by the way, as little as two weeks ago we requested a briefing on the 26th, and they loudly refused our contact. I even went to the regional office myself, requesting to give them a list of the things on which we wished to be briefed. They said: We won't talk about this, can't talk about this because of the Administrative Procedures Act, which is hamstringing any meaningful input from the user.

Senator McCain. Thank you, Captain. I want to thank you for your testimony.

And, Larry, I hope that perhaps you could also provide for the record—and we'll keep it open for a couple of weeks—a description the kind of TCA you would like to see designed so that the very impressive and important recreation that you and your organization are engaged in could continue. Or have you provided it already?

Mr. SANDERSON. No. I was just saying we will be delighted to work with you on that and to reiterate to you right now and to the others in the room, that we recognize the need for what's being talked about here. And what we object to in general, Senator, is the concept of a vast circle of air space that—right now it would simply eliminate us. And we would work with yourself, with any other viable group to allow these sites to continue to operate, and we shall do so.

Senator MCCAIN. Good. I think it might be helpful if we had that as part of the record so that we could make sure that the record reflects your position exactly.

Mr. SANDERSON. We'll meet the deadline.

Senator MCCAIN. Thank you.

Senator DeConcini, did you——

Mr. RUSSELL. May I make a couple of other comments?

Senator MCCAIN. Sure.

Mr. RUSSELL. First of all, your comments, the comments of the committee about the aviation trust fund, we received information October 31, 1986, that the amount in the aviation trust fund was 8.1 billion dollars.

Senator DECONCINI. That's correct.

Mr. RUSSELL. We're adding to that at the rate of $100 million a month. However, that should be considerably more than the $6 billion that was mentioned, and nobody has accounted for that. It's hidden in the general fund and should be removed. And I'm in hopes that you gentlemen will be instrumental in effecting that. ALPA, of course, supports the FAA.

Senator MCCAIN. Could you let me respond? As you may know, Mrs. Kassenbaum has introduced legislation I cosponsor to remove that fund and place it in a separate category. I hope that we will see passage of that legislation. And I'm sure you're aware that it has not been passed because it contributes to the Federal budget and through an accounting process decreases the budget deficit.

Mr. RUSSELL. Yes, sir. We support you, of course, on the removal of the FAA. We feel it deserves cabinet-level status, and we're in hopes that that will happen.

Senator MCCAIN. Well, I think you should be aware that the effort to make the FAA an independent agency would not move it to cabinet-level status but simply make it an independent agency. Frankly, I'm not sure; I don't know when the last time the full cabinet met. Do you know? So I'm not sure if that cabinet status is as important as the independence of the agency.

Mr. RUSSELL. All right, sir. And, as far as the FAA departing the meeting early, it does not surprise me a single bit. We have been turned off quietly. We have quarterly advisor meetings, or they're TCA-user forums. However, they have become what you saw today: An FAA show. And it must be returned to the users because we—they're down there because we are up here, and not the other way around.

Finally, the most single important thing that can happen to prevent mid-air collisions is the installation or the mandatory installations of white strobe lights on every airplane that is going to fly that is capable of carrying—And I'm not talking about the small ones. I'm talking about the more powerful units. And it would have even prevented the crash—My own feeling is that it would have prevented that crash or the mid-air collision that occurred last week. And, of course, we had another one yesterday, not the TCA, but two FAA teams. It looks like they got together. And mid-air collisions, of course, is our greatest threat.

Thank you very much.

Senator McCAIN. Thank you.

Senator DECONCINI. Mr. Russell, while you have the mike. I'm not going to ask a lot of questions, gentlemen. It's been a very educational experience for me, and I thank acting chairman McCain and Senator Chairman Ford for letting me join you today. But I gather from your testimony, Captain Russell, that you support this TCA here?

Mr. RUSSELL. I certainly do.

Senator DECONCINI. Yes. And you sound to me as—don't take this offensively—as bureaucratic as the FAA is charged to be, that it doesn't make much difference what those other people say about it, you think that's the only way to go; is that correct?

Mr. RUSSELL. I believe—I believe that there is air space enough for everyone for—to take care of all interests. I think, by working together, we can effect a TCA that will accommodate the general-aviation aircraft, and I'm not sure about the soaring people.

Senator DECONCINI. Well, I thought you said you support the TCA number two, or whatever the kind that has been implemented?

Mr. RUSSELL. That's the starting point only, and I said a systems approach in my record.

Senator DECONCINI. So you would support a modified——

Mr. RUSSELL. Special, most definitely.

Senator DECONCINI [continuing]. TCA?

I didn't gather from your statement——

Mr. RUSSELL. It's in the record there that a systems approach is necessary to this one, and I think——

Senator DECONCINI. So you think a TCA can be constructed for a unique place like Phoenix, Arizona?

Mr. RUSSELL. Most definitely.

Senator DECONCINI. That was my concern.

Well, have you done it in Los Angeles?

Mr. RUSSELL. We are still working on it. I was a part of the task group that worked on this, and there's no sense in plowing the ground twice. We have gone through this to establish a standardized size and shape for the basic TCA. The modifications for the particular area in which this will be installed is very important, and we realize that. But a case must be made for it, and I think these people are making it and responding to it.

Senator DECONCINI. But you see a distinction between what's in Los Angeles and what might be here?

Mr. RUSSELL. Most definitely.

Senator DECONCINI. Thank you.

Thank you, Mr. Chairman.

Senator McCAIN. Thank you. I'd like to thank the panel, and I appreciate your patience and your very important testimony. Thank you very much.

Now, if we could begin. If anyone would like to make a two-minute comment to the committee, please feel free to come right up to this microphone. Now we're going to have a round-table discussion.

Mr. SIMMONS. My name is George Simmons. I'm the president of Experimental Aircraft Association, Chapter 228, here in the Valley, and I'd like to make a statement on behalf of the EAA, myself, and our chapter, in that we oppose the large, single-class TCA. Excuse me. It does not take into consideration all of the users and tends to exclude all but the people with fat pocketbooks. Many of the EAA folks operate on a shoestring budget, such as myself, barely make it into the five-figure income group, and still are able to support, at the expense of some other luxuries, my habit to fly. I believe that a user-friendly TCA can be developed and should be developed in the form of corridors and that, if we are able to overcome the FAA's blocks and are able to make our inputs known in advance, that this can be done. But at the present it doesn't look like it can or will be done because it's not supported by enough people. The Airline Pilots Association wants to put in a TCA that starts at 30 miles and then make modifications later, where he himself said that, once it's in place, it's nearly impossible to get it changed. He wants the 30 miles first, modifications later, and everybody else be damned.

Myself, I could make some adjustments to my income and put in a Mode C transponder. But I don't think it's necessary to have a 30-mile circle and to be forced into that transponder when you don't even go near Sky Harbor in the first place. I have no need to go near Sky Harbor. I don't go near Sky Harbor. And it's not necessarily the money; it's the access, just as stated earlier.

Senator McCAIN. Thank you very much, sir.

Mr. SIMMONS. You're welcome.

Mr. MILLER. I am William Miller. I, too, am a member of the Experimental Aircraft Association. I'm one of the old, old members—you can see by my age—a little older than John or Senator DeConcini. I want to reinforce what my president has just said of the local organization that I belong to. I've been flying since 1939. In World War II, I was on B24's and B29's. And I feel I understand fairly well what is needed in the Phoenix area. The Phoenix area has so many small aircraft around, this—these smaller fields that need to have an opening to get into the air. If we use the TCA which is the inverted wedding cake, we take up too much of our air space, and the small fellow with his air space has little chance to do anything; he's just being, slowly crowded out of the air. By the same token, because of the cost of the instrumentation, it's necessary to have the transponder that will be required to get this air space. Many of these fellows aren't going to fly any more, and they are being pushed out of the air.

I resent another thing, which I think both you Senators have realized by now: This meeting was not really advertised that well. In order for us to find out how to get here to come to this meeting, the Experimental Aircraft Association in Oshkosh, Wisconsin, called us by phone to notify us that there was going to be a meeting here. We had no other way of knowing it locally.

We would like to put our emphasis again into the fact that we would like to see a corridor space, that program of controlled corridor space, and not a TCA inverted wedding cake.

Thank you.

Senator McCAIN. Thank you. Thank you, sir.

Mr. ORDWAY. I'm Bill Ordway. I'm a member of the Arizona Soaring Association. Mr. Chairman, Senator, I can't add too much to what—to Larry Sanderson's statement, but I want to make the point that I'm speaking for the Arizona Soaring Association and that we as an association support, with the Arizona Pilots Association, the proposal, and that is the corridor concept. We think it is the right concept for us, and we recognize that that concept still may restrict some of our activities.

The long flights that were mentioned by Mr. Sanderson are something that we make frequently from here. An afternoon flight may be several hundred miles, and it may transit the area we're talking about. Whether or not corridors will block that possibility, we don't know for sure. But we support it, and we support it primarily because we're fighting for our lives. We recognize that the safety is absolutely necessary. But we've got commercial operations here that, as Mr. Sanderson points out, attract people from around the world and around this country. And those operations, whether they can survive or not, if this goes in, I'm not sure. If I, as a pilot, take my sail plane to either one of those operations and intend to go soaring cross-country, I would not be able to do so if this goes in because I'd have to come out at a low altitude and run the risk of climbing out before I can get altitude.

Mr. Sanderson mentioned a competition held last year that attracted top world champions from around the world, and we had the organization here and the facilities, and we were able to host that competition. We have hosted here for 14 years regional competitions which attract people from several states, and we won't have these facilities for that competition if this happens. We think that we absolutely agree with safety, and we would like very much to operate with safety, but we think we can continue what has been an over 40-year era of soaring in the Phoenix area.

Senator McCAIN. Thank you, Bill.

Is there anyone else?

Oh, one more.

Mr. CHRISTOPHERSON. Mr. Chairman and Senator DeConcini, I'm Jack Christopherson, the director of the Division of Aeronautics for the State of Arizona. We do, as general aviation and aviation users in Arizona, appreciate your efforts in having this hearing here in Phoenix. We think it's very important. We do ditto the comments that have been made by many of the respondents here today. The one thing that I wanted to stand up and make you aware of: We have in place the Arizona Air Space Utilization Committee, AAUC. It's been in place for several years. They do have—we have input. We have membership from every—every person—or every association——

Senator McCAIN. How about the legislature?

Mr. CHRISTOPHERSON. Well, yes. We have Senator Todd.

Mr. TODD. Ex officio.

Mr. CHRISTOPHERSON. Ex officio member. But we do have input from the Senate and the House; we have that in place. We have good input from the FAA. In fact, the co-chairman of that committee is Mr. McClure, Mac McClure, the director of the western region of the FAA. We do have that in place. We would, if it's possible, request that—Senator Todd requested a two-week extension for comments. We would request that maybe you give us one more week. We have a meeting on the 17th of the AAUC.

Senator MCCAIN. Staff tells me that's fine.

Mr. CHRISTOPHERSON. Okay. We would appreciate that, if you'd give us sufficient time to formulate a comment or several comments from the AAUC, and I thank you for your time.

Senator MCCAIN. Thank you.

Mr. CHRISTOPHERSON. Yes, sir.

Mr. LEVANDOWSKI. Senator DeConcini and Senator McCain, my name is Leonard Levandowski. I'm with the Flight Standards District Office here in Scottsdale. I'm an FAA representative, and that's why I'm here. I submit that there are FAA representatives here. We have been here during the entire hearing process. So with regards to the fact that the panel has left, I assure you that they did not do that for lack of interest. And I do assure you that we are concerned about the safety. We'll all be part of that process as it continues.

And I think we work very closely from the district office. And from the local coordinator point of view, Mr. Christopherson's view, and all your groups, that we are concerned with safety.

Senator MCCAIN. Thank you. And let me state in response, if I could, there are many times where Senator DeConcini and I have to leave hearings and other events, and we usually—in fact, always—try to explain that we have to leave. I think this matter would not have even arisen if the panel members had said, "I can't stay to hear other panelists." So you might——

Senator DECONCINI. Would you yield?

I'd like to just ask you a question. You heard all this testimony?

Mr. LEVANDOWSKI. Yes, sir.

Senator DECONCINI. Do you feel comfortable that the input from these groups is seriously going to be part of this process?

Mr. LEVANDOWSKI. I firmly believe that.

Senator DECONCINI. I don't mean just a show. Are they really going to have a chance before the decision is made, either here or in Washington or both, to be consulted and maybe make some alterations?

Mr. LEVANDOWSKI. I thank you for the question, and I'd like to give you my answer. I have been an office manager in the Flight Standards District field office. I'm a pilot, so I share those skies with you when the opportunity arises. I've been a district office manager in Riverside, and I don't know if many folks have been aware of the ARSA meetings that took place there. But, in any case, there were user inputs there. And that ARSA shape has changed as a result of that input. I'm totally confident that the remarks and the comments that are going to be made here and through that process will be considered.

Senator DeConcini. Thank you. I will pass that on to Senator McCain.

Senator McCain. Thank you very much.

Mr. Levandowski. Yes.

Senator McCain. Sir?

Mr. Kronberg. Senator McCain, Senator DeConcini, I'm Marvin Kronberg. I live here in Phoenix, and I'm just a private pilot who has flown in out of Sky Harbor. My plane is tied down here in Sky Harbor. I've worked hard to keep my flying skills in order, and my plane is equipped with Mode C. Two years ago, I watched the controllers in the tower, and I went out and bought a Mode C transponder, and I would encourage everybody to do the same.

But my point is some of the other changes recently in the FAA have not been beneficial in my opinion. I don't write off my flying costs with a business or anything. I use my airplane like most people use a car. From here to Dallas, I fly instead of drive. I do a lot of cross-country flying.

The conversation has not been positive, and so I'm cynical about the change to the TCA here. I'm very concerned about safety, but—but I'm also very concerned with access to Sky Harbor. And I encourage you gentlemen to do whatever you can to keep people like myself and others who are interested so that we can continue to have our plane here and contribute to the little microeconomy such as we do.

Thank you.

Senator McCain. Thank you very much. I'd like to also again express my appreciation to Senator DeConcini, who obviously is extremely knowledgeable, and my friend Senator Ford, who is obviously very knowledgeable on this issue and has shown concern about it for many years. I also think it's important to note that, as a member of the appropriations committee, Senator DeConcini will play a very key role in funding the improvements in the facilities which are so badly needed. One of the witnesses mentioned, Dennis, that we have no NAVAID here at the airport, and it seems to me that we need to get that.

Senator DeConcini. That was a worthwhile comment. I didn't realize we didn't have it.

There's one lady there.

Senator McCain. There's one lady here. Let me finish. I do appreciate Senator DeConcini's presence here and his obvious commitment to this issue which is, to say the least, somewhat contentious, and I will certainly look forward to working with him in the future as we make sure at least that the inputs and the ideas and the knowledge of those witnesses we've had before this committee are taken into full consideration as the FAA goes through this TCA process.

Yes, ma'am.

Ms. Rogers. My name is Nancy Rogers, and I am a certified flight instructor. I have, been flying in Arizona for about 11 years. I learned to fly out of Sky Harbor. In fact, I made my very first flight out of Sky Harbor. I teach. I have two airplanes. I freelance and teach students out of Sky Harbor, teaching them how to fly. And one concern that I have thought about when you talk about a TCA, where we have positive-control air space around the Phoenix area, is how it is going to affect the learning process of people that are just learning how to fly. The two Cessna 152's that I have, we're currently in the process of putting altitude coding in those airplanes because I feel that is something necessary. But if people are restricted where they can't learn how to work in the system from the very beginning phases of their flight training, if they don't know how to work in a system because they're kept out of it, I just wonder what's going to happen to the pilot as he matures and he learns—or he stays away from controlled air space because he's afraid of it because he wasn't allowed to participate in that air space from the very beginning of his training. And that was the only comment that I wanted to make.

Senator McCAIN. Thank you.

Do you have any thing else to add?

Senator DECONCINI. No, thank you, Mr. Chairman. I appreciate your kind words and look forward to working with you.

Senator McCAIN. Thank you all for being here. If there's no further business, that's all.

[Whereupon, at 12:20 p.m, the hearing adjourned.]

ADDITIONAL ARTICLES, LETTERS, AND STATEMENTS

STATEMENT OF BETTY J. KJELLBERG, SCOTTSDALE, AZ

Since the mid-air collision in San Diego that led to the creation of the first Terminal Control Area, the FAA has steadfastly maintained its position that greater airspace control will equate with fewer aviation accidents. The general public, lacking any special knowledge of aviation or air traffic control but concerned about perceived safety hazards, has also taken up the cause of further airspace restrictions. I believe greater airspace control in the Phoenix area does not equate with increased safety, especially if additional controlled airspace is designed in an arbitrary and capricious manner without input from all users of the airspace.

Let me first offer my credentials: I am a private pilot with an instrument rating. I learned to fly at Sky Harbor International Airport and therefore, do not feel intimidated about communicating with controllers. I also recognize the hazards of flying in a high-density traffic area, with a mix of high speed military traffic, air carriers and air commuters, helicopters, balloons, and my fellow general aviation pilots. I am not against air traffic control. I *am* against irrational and irresponsible decision-making processes that do not involve the persons affected by the decisions.

When the NPRM regarding the universal TCA was published in the June 16, 1987 Federal Register, a question immediately sprang to mind. Does a circular TCA provide the safest flying environment? The "wedding cake" configuration was originally developed when airport arrivals and departures were handled in a more random manner. With the development of structured arrival and departure flow patterns, the necessity of protecting or sterilizing large circular areas of airspace around a primary airport is questionable.

When the new ARSAs were proposed, the FAA promulgated them as standardized shapes. However, as they were implemented, it rapidly became apparent the standardized shape would not work satisfactorily because of local variations in terrain and airspace utilization. One need look no farther than the Ontario-Norton ARSA in California to see how well the standardized approach to airspace works. There is no reason to assume that it would be any easier to implement standardized TCAs.

Problems of boundary identification are likely to occur with implementation of a circular TCA. A configuration proposed by the FAA for Phoenix requires use of DME in conjunction with the localizer frequency to identify the circular boundaries and the Salt River VOR to identify radials dividing the segments of the TCA. Thus, a pilot would be required to have two VOR receivers in order to identify the boundaries of the controlled airspace. It is extremely important to keep in mind that TCA boundaries are only important to the VFR pilot who is either trying to stay out of the airspace or get clearance to enter. The IFR pilot is already part of the system and has clearance to enter the airspace. VFR pilots, who traditionally uses straight line, dead reckoning navigation based on prominent landmarks, will not be able to visually identify the boundaries of any circular shaped TCA. Lacking such landmarks, one can assume that boundary penetration will occur. The frequency of inadvertent ARSA penetration, during initial implementation, is evidence of the difficulty VFR pilots have in avoiding airspace restrictions that lack visual cues.

Traffic compression around the periphery and under the middle and outer rings is likely. In the weeks immediately following the SFAR regarding the Los Angeles TCA, their TRACON experienced an 83-percent increase in VFR TCA transit requests and a 37-percent increase in IFR filings in the Los Angeles basin. General aviation flying is estimated to have decreased 60 percent since the imposition of the SFAR in Los Angeles. One can only guess what the impact of the SFAR would have been on controller workload and airspace congestion immediately around the TCA if flying hours had been maintained at previous levels.

It can be assumed that similar limitations would occur if a TCA is implemented in Phoenix. If the FAA's true intention is to severely limit general aviation flying, implementation of a TCA will accomplish that goal. To attempt such a goal, however, negates the economic importance of general aviation to the state of Arizona.

The current Phoenix ARSA configuration requires pilots to be in communication with a controller when penetrating the defined ARSA airspace. It is assumed that a substantial amount of general aviation traffic is still flying above the ceiling of the ARSA (5,100 feet MSL). If a TCA with a ceiling of 10,000 feet is implemented, that additional traffic will need to either be handled by the controllers or refused entry into the airspace. Assuming the floor of the middle ring is at 3,000 feet, it will not be possible to overfly any of the airport traffic areas at the Valley's secondary airports. Thus, aircraft that attempt to underfly the middle ring will likely penerate local airport traffic areas. Because there is rising terrain on the north side of Sky Harbor (Squaw Peak and Camelback Mountain) the possibility of terrain collision must also be considered. In general, implementing a TCA would be much more complicated in Phoenix with its varied terrain and problems of radar coverage behind that terrain, than in generally flat area (such as Minneapolis).

The proposed TCA configuration fails to consider special use aircraft that already exists. A TCA with a 30 mile radius, as proposed in the June 16, 1987 NPRM, would bisect the runways at both Luke and Williams Air Force Bases. Local users have worked very closed with the military to educate local pilots of the dangers of penertrating the airspace around both of those heavily used bases. Yet, traffic that attempts to circumvent a TCA to the east or west of Phoenix, will be right in the middle of extremely hazardous airspace with military aircraft traveling at speeds up to 350 knots.

A problem that is not directly safety-related is the probability of increased noise pollution. The area just west of the Scottsdale airport is currently extremely noise sensitive. New procedures that might cause traffic to fly at lower altitudes would adversely impact on relationships with these airport neighbors and be perceived as a new safety hazard by the general public.

Imposition of a TCA in Phoenix would adversely impact operators of ballons and agricultural aircraft. The vast majority of currently operating agricultural aircraft are not transponder equipped and of course, balloons generally are not. It is not the intent of this testimony to focus on the economic impact of the implementations of a TCA. However, local ballonists state that the implementation of a TCA in Phoenix will effectively eliminate their operations, and therefore, their economic livelihood.

Finally, the major question remains as to whether there is sufficient manpower available within the FAA to appropriately staff a new TCA. Without adequate manpower and equipment, it is foolhardy to attempt to further complicate local procedures that currently are working. There is concern that because TCAs are staffed by a different grade controller, we could lose our current complement of capable and knowledgeable controllers.

In the late 1960s and early 1970s, the National Transportation Safety Board recommended that designated climb and descent corridors be established to connect major airports with a stratum of upper level airspace in which all aircraft would be subject to Air Traffic Control. This concept was never totally accepted. It appears the time has come to seriously investigate this corridor concept as the most rational method of protecting or sterilizing that airspace with the greatest safety hazard due to potential mixing of heavy and light aircraft of varying speeds. This concept has particular merit in Phoenix where there are well established arrival and departure routes.

Rather than arbitrarily implementing a method of airspace control that has been shown to have flaws and within or around which accidents have occurred, I strongly support trying something innovative. Let us not merely add bandages and patches to a system that is becoming more and more complex. Let us carefully analyze the airspace resources in Arizona and consider local needs and concerns. Let us involve all users of the airspace in a dialog to design a flying environment that is effective, efficient, and safe.

STATEMENT OF JEFF TURNER, PRESIDENT, ARIZONA SOARING ASSOCIATION

INTRODUCTION

The Arizona Soaring Association provides this Executive Summary in support of testimony given orally and in writing by The Soaring Society of America. Though our commentary here addresses primarily "standardized" Terminal Control Areas, we note that broadly expanded requirements for electric avionics will adversely affect ALL soaring activities in Arizona and throughout the country. Particularly considering motorless flight, it must be understood that altitude and airspace limitations impose very real safety limitations on soaring flight.

TESTIMONY

The Arizona Soaring Association endorses "Terminal Safety Corridors", which will best suit the needs of air carriers, Air Traffic Control, and general aviation. We recommend establishment of a working group to develop the specific Terminal Safety Corridor plan because:

- Terminal Safety Corridors are simpler than the standardized 30 nautical mile radius TCA
  - "Simplicity" is an operational concept, not a geometric one
  - A standardized round TCA appears "simple", but operations within it are a complex combination of arrivals, departures and through-flights
  - Corridors simplify operations by providing airspace exclusively for arrivals and departures

- Terminal Safety Corridors are safer than the standardized 30 nautical mile radius TCA
  - The standardized round TCA forces Air Traffic Control to manage more aircraft and a greater mix of traffic.
  - Corridors, involving as much as 80% less airspace, allow ATC resources to be focused on the smaller collision threat area rather than be diffused over 3700 square miles

- Terminal Safety Corridors are more economical than a standardized 30 nautical mile radius TCA
  - Substantial economies are realized at sattelite airports, with only slight inconvenience to turbine powered traffic
  - Operations at sattelite airports not under corridors are largely unaffected; impact is minimized at other airports
  - Student training areas and access to popular VFR routes are minimally affected
  - FAA cost/benefit parameters are enhanced because workload is focused on arrivals and departures in the corridors

Particularly in view of the impact to soaring flight, The Arizona Soaring Association opposes implementation of a standardized 30 nautical mile radius TCA because:

- An estimated 84,000+ annual aircraft operations at the three Phoenix area soaring sites would be negatively impacted by overlying TCA airspace
  - Standardized TCA floors will unsafely limit altitudes used for training and cross country to one third the altitude range legally accessible today.
  - In view of the sites' national and international reputations for outstanding soaring, such a decrease in safe, useable altitudes invite economic instability

- No Phoenix area sailplanes are equipped to fly in TCA airspace
  - Required equipment costs an average of $7700 to $8800 per aircraft which is 70% to 100% of the value of the most popular US sailplane
  - Battery capacity will be exhausted after as little as one to two hours

- FAA "Letters of Agreement", whereby aircraft without required avionics may seek authorization to fly within TCA airspace, are unsatisfactory because they are ATC workload dependent
  - Actual authorization to use the airspace is granted or denied approximately one hour before the proposed flight(s)
  - Flight schools in particular can remain economically viable only if continuous access to airspace is guaranteed

We conclude that the standardized 30 nautical mile TCA causes undue impact on uncontrolled operations. We note that FAA recommends that pilots seeking assured protection from hub airport arrivals and departures should remain below TCA floors. We also note that, as per existing FAR's, air carriers may be authorized by ATC to operate in that same airspace. In short, we find the over-size and operationally complex standardized TCA an unreasonable configuration, in terms of both safety and local economic impact.

Based on the foregoing, and in the best interest of safety, The Arizona Soaring Association endorses the Terminal Safety Corridor concept. We join with other local and National user organizations in recommending a working group be established to define a specific plan for implementation at Phoenix. We are confident, as well, that such a logical and operationally simplified terminal airspace design can serve as a precedent for other locations. With respect to airspace issues in general, we urge support of a broad and consistent airspace policy to prioritize safety above other considerations while maintaining a balanced accomodation of both heavy and light aircraft.

Arizona Soaring Association: Supporting Data

In addition to reviewing supporting data submitted by The Soaring Society of America, The Arizona Soaring Association urges Congress to consider these items:

- Activity summaries from each Phoenix area soaring organization
  - The Arizona Soaring Association
  - Soaring Operations at Carefree
  - Estrella Sailport, Arizona Soaring Inc.
  - Turf Soaring School
- Terminal Safety Corridor concept - narrative description
- Terminal Safety Corridor concept - plan view over Phoenix
- Current edition of FAA Advisory Circular 90-83 "Terminal Control Areas" (Please refer to highlighted wordings)
- Excerpt from current Federal Aviation Regulations (Please refer to highlighted wordings)

SCOTTSDALE PILOTS AND AVIATION ASSOCIATION
POST OFFICE BOX 5504
SCOTTSDALE, ARIZONA 85261-5504

January 29, 1988

Aviation Subcommittee of
The Senate Committee on Commerce, Science and Technology

Gentlemen:

The Scottsdale Pilots and Aviation Association is a group of pilots, friends of pilots and others interested in aviation as it relates primarily to general aviation about the Scottsdale Airport. The Association is also vitally interested in legislation that affects or impinges on the flying activities of those who use the airport.

In August the Federal Aviation Administration published a Notice of Proposed Rule Making (NPRM) relating to a Terminal Control Area to which the Association responded. We have attached a copy of our response and still consider its arguments against many points of the FAA's proposal to be valid.

We are not against safety. Far from it. We want the skies to be safe! But our views on "sterile airspace" differs considerably from that defined by the FAA. We do not believe the FAA's "Universal or Super TCA" to be the best solution of making the skies safe. The FAA wants to change the configuaration at 23 existing locations throughout the country and add the newly configured TCAs to nine new airports. One of these nine is in Phoenix. We also believe Phoenix to be the first on the list the FAA will want to change from its present Airport Radar Service Area (ARSA). The Phoenix ARSA, inaugurated in June of 1986, is not doing all the FAA told us it would do at the time. For instance, at times during high commercial traffic periods, it is very difficult for a general aviation pilot to obtain permission to enter the ARSA airspace. As a result, many pilots simply fly around or under the ARSA, causing congestion of general aviation aircraft at the periphery of the ARSA. We believe the larger TCA with its 60 mile diameter to be just another case of the FAA having a mechanism whereby it keeps general aviation aircraft out of the defined airspace because it is not (and cannot be) manned sufficiently to adequately service the VFR general aviation traffic. The general aviation pilot will again try to fly around the "barrier" and cause potential problems, either through congested airspace outside the TCA or by overflying Williams or Luke Air Force Bases, increasing the traffic in their Military Operating Areas, or penetrating restricted areas not now entered by general aviation aircraft.

Further, we believe the commercial carrier traffic needs to have its approach and depareture routes protected from VFR general aviation traffic. This can most easily be done by sterile CORRIDORS, into which the FAA can impose its restriction of pilot training, Mode C transponder equipment, etc. But these corridors need not take up a volume of airspace that reaches from the surface to 12,500 feet for a diameter of 60 nautical miles! And with Phoenix's parallel runways defining the approach and departure directions, the corridors, when defined for Sky Harbor, will probably not extend more than 3 to 4 miles either side of the runways and perhaps flare out somewhat to take in turns when the aircract has reached altitude. This configuration certainly will not encompass the 5,800 cubic mile volume now proposed!

To penalize all the other general aviation enthusiasts by making them have mode C transponders seems ludicrous within the proposed 60 mile diameter cylinder. The FAA's proposal does not address the legitimate air activities of balloonists, sail plane enthusiasts, agricultural applicators, ultralite operators, traffic watch aircraft, police helicopters, medical evac helicopters and the like.

We believe the FAA's proposed Universal TCA configuration to be ill conceived because it has not given detailed thought to the problem of identifying general aviation aircraft and keeping them away from commercial aircraft around the airport in question. Nor has the Administration discussed with users the proposed makeup of the TCA.

From what we can gather, the vast majority of comments received by the FAA in response to their NPRM relating to the Universal TCA have been negative in nature. We are quite concerned over the FAA's failure to respond to user inputs. Its approach of simply saying "let's make all TCA's throughout the country uniform and 60 miles in diameter," whether local conditions can accomodate that configuration or not, is simply a way for the bureaucracy to bulldoze its way to it self defined goal.

The FAA does not, in our opinion, require a 60 mile diameter cylinder in which to provide safe separation. A well tought out Terminal CORRIDOR concept, as proposed by the Aircraft Owners and Pilots Association and the Experimental Aircraft Association (AOPA and EAA), is the concept to pursue.

Sincerely yours,

Howard O. Barikmo
Chairman, Air Space Committee

for

William F. Tobey
President

Phoenix, Arizona
January 29, 1988

Senator Wendell Ford
Senator John McCain

This letter contains my comments on the "Super TCA" for Phoenix as proposed by the FAA.

I am an aviation safety consultant and retired from the FAA after 31 years of service in air traffic control. I was also an FAA designated pilot.

This TCA proposal was designed by the FAA without any inputs from the users of the airspace. The real world of aviation safety is in the cockpit of the airplane and not in the control room. Therefore, the users of the system should have a say in the planning of any airspace proposal .

The FAA proposal with large blocks of airspace has been developed without regard to user needs and the ability of the air traffic control system itself to accomodate the control of more aircraft. This proposal contains over 2,800 square miles of airspace. That area is twice the size of the state of Delaware and three times the size of Rhode Island. Does the FAA really need that much airspace just to control the air traffic at one airport? Does not the FAA realize that there are ten other airports in this block of airspace that would be affected by this proposal? These other airports generate much more air traffic than does Sky Harbor Airport.

The FAA must make a commitment to a "clean-sheet-of-paper" redesign that addresses the years of compounding problematic decisions which have been imposed on the Phoenix flying community without the logical integration of overall planning that comes from periodic and careful reassessment.

There is a better way to reconfigure the airspace to closely reflect the operational needs of the air traffic at the airport. Defining specific arrival and departure corridors and conforming "sterilized" airspace only to these entry and departure routes will provide protection for airline aircraft and eliminate the compression of other aircraft outside this designated airspace. This would result in the combined benefits of traffic separation and increased safety for all catagory aircraft.

The Terminal Corridor Concept could just be the future for our terminal airspace problem at Phoenix. There are many advantages to this concept. Here are a few:

- Reduces the potential for airspace which is used by both high-performance airline passenger-carrying aircraft and slower aircraft in operation around specified high-density airports in congested terminal areas.
- Provides standard arrival and departure areas in which positive separation between all aircraft can be assured with simplification of airspace design.

- + Enables high-performance aircraft to be operated at their optimum efficiency on pre-planned routes.
- + Enables arrival delays for high-performance airline aircraft to be absorbed at high altitude or on the ground at the least expense.
- + Provides an airspace environment in which the maximum stability of configuration and course is achieved, thus reducing cockpit workload.
- + Releases large areas of airspace in the vicinity of airports that are required by current TCA configuration.
- + Reduces controller and pilot workload.
- + Provides safer airspace outside the TCA in which other aircraft can be operated without undue delay, excessive control or compression.
- + Enhances understanding and charting of terminal airspace, which results in a greater ability to avoid the airspace by non-participating aircraft.

I realize that the FAA is conducting a review of all TCAs with an eye toward addressing unnecessary complexity and enhancing efficiency. This should be done rapidly with both safety and simplicity in mind. I also believe that the FAA proposal is poorly thought out and is discriminatory against the majority of the pilots and aircraft operations.

Thank you for offering me this opportunity to comment on this very important issue.

Respectfully,

W.S. "Mike" Hunter
W.S. "Mike" Hunter

2032 W Anderson Ave.
Phoenix, AZ 85023

NATA
Founded
December 28, 1940

NATIONAL AIR TRANSPORTATION ASSOCIATION
4226 King Street • Alexandria, Virginia 22302 • (703) 845-9000

February 9, 1988

The Honorable Wendell H. Ford
Chairman, Aviation Subcommittee
Senate Committee on Commerce, Science, and Transportation
United States Senate
Washington, DC 20510

Re: January 29, 1988 Field Hearing On General Aviation Safety

The National Air Transportation Association (NATA) represents the business interests of the nation's aviation service companies, commonly called fixed base operators or FBO's and on-demand air carriers or air taxi companies. Our Member companies are not only located on airports, but also are operating aircraft in the air traffic control system. As such, we are vitally concerned with Federal Aviation Administration efforts to establish restrictions on the operation of general aviation aircraft.

The issue is congested airspace and the impact of this congestion on air safety. It is the Terminal Control Area (TCA) which now appears to figure most prominently in this airspace discussion. There are mixed feelings among our Members as to whether the TCA concept is a cure, or a cause. It appears that the FAA prefers to solve the problem of airspace congestion not by creative use of available airspace but by eliminating as many system users from affected airspace as possible. We are strained to find any other explanation for many recent developments. The very livelihood of our Members is threatened as we address issues regarding their ability to both operate aircraft in high traffic density airspace and provide services for other aircraft operating in the same airspace.

It is our view that the "report card" on TCAs, and FAA's ability to operate them for the benefit of all users is mixed at best. The Agency's stated desire to simplify the design and function of TCAs is wholeheartedly endorsed by the Members of our Association. Unfortunately, TCAs, once established, have been modified and remodified time and again resulting in unnecessarily complex airspace. All too often the specifics of such airspace are virtually impossible to discern by experienced operators of high performance aircraft.

NATA shares FAA's goal of enhanced safety, however we prefer to accomplish this goal by separating aircraft from aircraft, not by separating aircraft from airspace as proposed by the Agency, now, and in their previous patchwork attempts to design safe, useable airspace. In recent years the FAA has shown a marked reluctance to include the user community in any fashion that would allow such useful assistance in planning. The Administrator's imposition of SFAR 51 in Los Angeles in August 1987 without regard to the recommendations of an active workgroup (of the type so long recommended by this Association) composed of FAA personnel and system users working on real solutions to Los Angeles airspace concerns, only reinforces this conviction.

Honorable Wendell H. Ford
Chairman, Aviation Subcommittee
February 9, 1988

We are aware of alternative airspace structure proposals that have been put before both the FAA and your Subcommittee. NATA is currently reviewing these concepts and their relationship to TCAs and other controlled airspace and will comment on their merit in the near future. It is apparent that the FAA does not have a monopoly of wisdom on these matters and we heartily support any effort your Subcommittee might make to encourage the FAA to give thorough consideration to these concepts. Of concern here is the possible loss of a good idea by a "kneejerk" Agency reaction to protect their proposals rather than admit that an outside entity could be of assistance. The goal is safer airspace and all concepts should be given proper consideration and examination.

NATA believes that any discussion of a TCA in any specific location is an integral part of the discussion of "airspace" issues on a National scale. It is tragic that these issues have, to date, been addressed in a patchwork fashion as opposed to a national plan created by cooperation between Government and industry. Our Members represent a major segment of professional aviation engaged in interstate air commerce as well as operators of the ground facilities for fuel and maintenance. This body of expertise has made clear to us their concerns regarding these issues.

Before the FAA proceeds to add additional controlled airspace, NATA would like to be assured that the funds spent and sacrifices required will actually result in added safety. Professional aviation has historically sacrificed much to increase the safety of air travel for the public.

Our Association is quite concerned about both the FAA's ability to manage increased TCA airspace at current equipment and staffing levels without restricted access especially in view of the status of their ambitious National Airspace System Plan. Although we approve the Agency's efforts to standardize TCA structure, their latest proposals appear to ignore pertinent differences in airspace and geography in specific areas. We are also concerned with the ATC system proceeding now with increased Mode C requirements and the Agency's proposed TCAS rules. NATA would prefer to have current problems addressed before we can feel comfortable with "forging ahead" with ambitious new programs.

It is NATA's view that many questions are open for answers. Many of our Members operate as family businesses and will be seriously effected by unnecessarily restrictive Agency proposals. Let us be certain that solid benefits will result. NATA is convinced that there are alternatives to many of the current Agency proposals and we count on Congress in performing their oversight role of Federal Agencies to assure all alternatives are pursued. You and your Subcommittee are to be highly praised for your efforts to date in this regard.

Sincerely,

William Power
Vice-President
Government Affairs

STATEMENT OF PETER J. SERVAAS

I am Pete Servaas, a strictly VFR pilot since 1938, and now a retired aerospace engineer. I live in Tucson but fly to and through the Phoenix area often. My wife and I use our airplane for transportation, which is mostly for pleasure now, as other people use their car. I appreciate the chance to submit this delayed statement for inclusion in the proceedings of your Aviation Subcommittee hearing. In my statement I am proposing a compromise solution, which includes some of the Airline Pilots Association (ALPA) suggestions as presented by Captain Russell, and some from the Arizona Pilots Association as presented by Jim Timm. Although,as a longtime AOPA member,I wholeheartedly support their position for redesign of the Air Space, incorporating the concept of Transition Corridors, I am afraid this is not in the immediate future. For the moment we are concerned about another nail in the coffin of general aviation in the form of more FAA restrictions. My proposal is based on statements in the Memorandum: "Staff Study for Proposed Phoenix TCA" from the Manager, Phoenix TRACON. It will achieve the same safety objectives, maybe even better, as in that Study,

without the need for expansion of the Phoenix TRACON or a change in their procedures, therefore

without increased federal expenditures,

without an excessive negative, in some cases devastating, economic impact,

without increasing the hassle for VFR pilots.

This is achieved as follows:

1. Leave the present ARSA as is. Clearance required to enter.
2. Require Mode C encoders above 3000 ft Above Ground Level (AGL) within 20 NM from Sky Harbor. Like the testimony of Larry Bowers for the National Air Traffic Controllers Association, I consider 30 NM excessive. No requirement for clearance to enter this air space.
3. Establish a team with representatives from all users and ATC, intimately familiar with the local conditions, to study and delineate the Transition Corridor concept proposed by the AOPA.

To justify this proposal I'll start with a discussion of the previously mentioned Memorandum from the Phoenix TRACON Manager. In the section: NEAR MID-AIR COLLISION (NMAC) ANALYSIS it is stated at the end: (quote) "It is apparent that had both aircraft been under positive control within a TCA, the NMAC'S would likely not have occurred" (unquote). This is not in agreement with the FAA's Notice of Proposed Rule Making (NPRM) for Terminal Control Area (TCA) Classification and Pilot and Equipment Requirements, which indicates that safety benefits will result if one or both aircraft are controlled. Comments on this NPRM by ALPA point out that air carriers are always under control and implies that they would be satisfied if the other aircraft was Mode C equipped, but not necessarily under ATC control, i.e., cleared to enter a specific air space. This section of the Phoenix TRACON Memoalso discusses the number of NMAC's that have occurred in their air space from August 15, 1985 till September 29, 1987, the date of the Memo. Eleven of these involved air carrier aircraft, which works out on the average to a little less than one every 2 months. If the "other" aircraft had been Mode C equipped, a vector from ATC to the air carrier, resulting in a barely noticeable course change, would have prevented the NMAC. This "event" would occur on the average once every 2 months. It is clear that the effect on the air carrier operation or on the ATC workload would be undetectable. If and when the Traffic Alert and Collision Avoidance System (TCAS) becomes operational, it would result in exactly the same procedure, which is an evasive maneuver for the air carrier, only the action might be a lot more violent.

With my proposal the only change required and the only economic burden would be for general aviation. Many planes in the general aviation fleet are already Mode C equipped and the large majority of pilots I have spoken to realize the inevitability and the necessity for it and the safety benefits for themselves. The cost of the addition of a Mode C encoder to our transponder, including installation and calibration, was $750 a few months ago.

In another section of the Phoenix TRACON Memo: IMPACT ON AIR TRAFFIC CONTROL (ATC) on page 5, it is stated: (quote) "There are no known delays encountered by VFR aircraft arriving or departing from Satellite airports. ARSA or radar traffic advisory service is provided without hesitation....etc." (unquote). Not always true even now, particularly when the controllers are busy. Then VFR traffic is the first to suffer. It becomes difficult to make contact, getting a word in edgewise so to speak. When overflying the Sacramento ARSA last summer in somewhat restricted visibility, not yet being Mode C equipped, an effort was made to contact Sacramento TRACON more than 20 NM out. We were well on top of the ARSA before succeeding. In the next 7 or 8 minutes, 4 frequency changes were required and 2 transponder code changes. This is a hassle, I don't like it and, so it appears from his testimony, neither does Captain Russell. This time away from looking for other traffic is a detriment to safety, not an improvement. Another reason I object to a requirement for radio contact in the proposed TCA is the added TRACON manpower necessary to provide adequate service. The cost for this would be substantial if this system, as the FAA plans, becomes universal over the entire U.S.A. It would contribute substantally to increased Federal budget deficits. By the way, I consider the estimates in the Memo for the increased manpower requirements for the Super TCA wildly optimistic.

It is generally agreed upon and even so stated in the TRACON Memo on pages 5,6 and 10 that the proposed Super TCA will be a severe burden for general aviation and the people that depend on it for their livelihood. Particularly the additional restrictions from the surface to 3000 ft AGL will cause serious problems. At present it is possible to fly south legally from Deer Valley or Scottsdale airports, without the need for Mode C, without the hassle of contacting TRACON and without taking up controllers time, and still avoid the ARSA, the Falcon Field Traffic Area, the Williams AFB MOA and the Chandler airport traffic pattern. The Super TCA will make that impossible. Two small private airports 7 NM west of Sky Harbor used by light planes and ultralights may be forced to stop operations. These are just two examples.

Overregulation is killing off the light plane segment of general aviation. Many times I have heard the remark: "I am not flying any more. It is too much of a hassle".

These detrimental effects would not occur if, as I proposed, the present ARSA is left in place and the air space outside it, under 3000 ft AGL is left uncontrolled. The safety of the air carriers is not affected since there is absolutely no need for them to use this air space.

Before the NPRM for the Phoenix TCA is issued, I feel strongly that a meeting of all users and controllers should be called at a convenient time (weekends or evenings), where this and other proposals can be brought forward and discussed. Mr. Chairman, I hope you will use your considerable influence to bring this about. I have no faith that the FAA will pay any attention to this statement, as it hasn't to a previous letter I sent them on the subject, or to thousands of other letters they have received.

The following is about: THE ATTITUDE OF THE FAA

Testimony at the hearing from airline pilots, as well as private pilots, describing the FAA as an autocratic, arrogant bureaucracy, was almost universal and also reflects my feelings. The management of the FAA benefits in position and G.S. rating by expanding their empire, and that is what they have been doing for decades, using safety as an excuse, from Airport Traffic Area, to TRSA, to ARSA, to TCA, to Super TCA and rumors of much more extensive and expensive control in the future, until every cubic foot of airspace over the U.S.A. is under their control.

This type of overregulation may have a place in the Soviet Union, but it is anathema for Americans who have been brought up to believe in the principles of Freedom and Democracy.

A very disturbing aspect of this expansion, in these times of high budget deficits, is the concomitant cost increase in the operation of the system. The FAA has never given much consideration to the possibility that other approaches might achieve the same objective, such as safety, at a much lower cost. This was called Value Engineering in the industry where I have spent most of my life.

The self-serving drive for expansion of their system is illustrated by their attitude about collision avoidance systems. In the early seventies the private sector had several promising Collision Avoidance Systems and Proximity Warning Indicators (PWI) under development, which did not depend on a ground system or controllers. The FAA did not encourage these efforts, because they would not have been in the loop, and they came to a halt. This is particularly disturbing, since it is entirely conceivable that a PWI could have been available to prevent the San Diego and Cerritos accidents. Also some designs showed promise of relatively low cost, hence suitable for general aviation. By far the greatest number of mid-airs occur between planes of the general aviation fleet, a fact not heeded by the FAA except for an occassional pamphlet. The Experimental Aircraft Association's (EAA) publication: "SPORT AVIATION" carried an article in their January 1988 issue, describing a Collision Alert System being developed by a single individual on an extremely low budget. This is the type of effort I expect the FAA to encourage and promote. Instead the FAA has chosen to go ahead with the extremely expensive TCAS. I do not object to the development of TCAS, however it is economically completely out of range for the average light-plane owner.

The U.S. General Aviation Industry, not long ago the strongest in the world, is now in dire straits, particularly the light-plane manufacturing section. Thousands of jobs have been lost. The blame for this can be divided between the trial lawyers, the insurance companies and General Aviation management. And now it appears that the FAA with its unjustifiable restrictions could add the straw that broke the camel's back. This is completely contrary to what Congress directed them to do in the Federal Aviation Act of 1958, which was: "The promotion, encouragement and development of civil aeronautics".
It was light-plane aviation just before World War II that supplied the nucleus of the instructor force that trained thousands of pilots in the Civilian Pilot Training Program (CPTP) and the Army Air Corps. I feel that a strong General Aviation is essential for the security of the U.S.A.

Now that light-plane manufacturing has almost come to a halt, the "little guy" has stepped in to keep it alive. Out of the Experimental Aircraft Association has sprung a movement that spawned many small manufacturers, which has contributed a great amount of innovative ideas, creating designs more efficient and better performing than the standard factory aircraft. In the last days of 1986, the year of the Challenger disaster, the flight of the Voyager gave a tremendous boost to American morale. Essentially the Wright brothers and the other aviation pioneers, were the kind of people that now make up the EAA. Without those early pioneers there would be no American Airlines, United Airlines....etc etc, flying their 747's. The EAA revived that spirit. We should make sure that it is not killed off by bureaucratic bungling.

To close, Mr. Chairman, I want to state that I am in complete agreement with your position for an independent FAA, headed by an administrator with indepth knowledge of all phasas of aviation, and who will heed the congressional mandate in the Federal Aviation Act of 1958 for: The promotion, encouragement and development of civil aviation.

G. HARRY STINE
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PHOENIX, ARIZONA 85021 USA

29 January 1988

The Hon. Wendell H. Ford, Chairman
Subcommittee on Aviation
Committee on Commerce, Science, and
Transportation
United States Senate
Washington DC 20510

Dear Senator Ford:

I would like to submit this letter as written testimony for the field hearing of the Subcommittee in Phoenix, Arizona on the subject of the FAA's imposition of restrictions on the flight of general aviation aircraft. I am a citizen who is alarmed by the bureaucratic arrogance and technical ineptitude of the Federal Aviation Administration.

I am a private pilot with an instrument rating who has logged 2,800 hours. I started flying in 1943. I own my own airplane which I use in my business as a consultant to the aerospace industry and several think tanks. Although my airplane flies at 130 miles per hour, it takes less total time and costs me less to fly it to Santa Barbara, for example, than to use commercial airlines and rental cars. As Chairman of the Committee on Pyrotechnics of the National Fire Protection Association, I am familiar with regulatory law and procedures. Thus, I know the regulatory procedures that government agencies must follow in order to promulgate and change regulations.

My leading statement that the FAA has become bureaucratically arrogant and exhibits technical ineptitude was not idly made. It is based on my personal experience with the FAA versus that with other government agencies over the past ten years. I have had extensive dealings with other offices of the Department of Transportation and found the people to be consciencious, eager to listen to new ideas, willing to examine new data, helpful in solving problems, and capable of accepting inputs from users. Unfortunately, save for the brief tenure of Lynn Helms as Administrator, the FAA has been just the opposite.

(This should not be construed to be a blanket indictment of FAA personnel. I have worked with some outstanding individuals in the FAA on the local level.)

At the top level in FAA Headquarters, the agency operates on politically driven panic reactions. Indeed, it has a long history of doing this, especially in airspace and safety matters. It seems incapable of carrying out simple forecasting to determine what the real world is likely to be in the near future; this is tragic because the federal budgeting, appropriation, and procurement procedures take a great deal of time, leaving the FAA far "behind the power curve" in meeting the actual needs of aviation safety. As a result, the FAA engages in panic reactions which place Band-Aids on existing systems to patch the holes created by working with outdated systems in the first place. Air route traffic control using radar was implemented by the FAA in reaction to the mid-air collision of a United DC-7 and a TWA Constellation over the Grand Canyon. However, air route traffic control radars more than thirty years later do not offer complete coverage of the controlled airspace. The FAA does not like to talk about this, partly because of the national security aspects. However, I personally know of many areas in the state of Arizona alone where radar coverage does not exist. And apparently no attempt is being made by the FAA to provide radar coverage in these areas.

Terminal Control Areas came about as a reaction to several mid-air collisions between airliners in the 1960 decade. The most notable of these occurred over Staten Island, New York. As a result, the FAA implemented TCAs. The TCA concept is now 25 years old, yet the FAA seems to think it's the ultimate answer to terminal airspace safety. This is not the case. The recent mid-air collision between an Aeromexico DC-9 airliner and a single-engined Piper Archer over Cerritos, California occurred within the Los Angeles TCA. The report of the National Transportation Safety Board is quite specific in placing part of the cause of that accident on the FAA air traffic controller and system.

In a panic reaction to a reported -- but never confirmed -- "near mid-air collision" between an American Airlines jetliner and an unidentified general aviation airplane outside the Los Angeles TCA over Malibu, the FAA acted to close the airspace over Los Angeles to all but airliners and military aircraft. The impact of this panic reaction has been well-documented elsewhere and has, in fact, created a far more hazardous airspace situation around Los Angeles because of general aviation aircraft having to circumnavigate the Los Angeles TCA. I know; I flew over to Los Angeles as recently as January 13-14, 1988, and the general aviation traffic was far denser than anything I have encountered in 14 years of flying my own plane to various airports in the Los Angeles area. It was only because of extreme pressure brought to bear by local California aviation interests, the Aircraft Owners and Pilots Association (AOPA), the Airline Pilots Association, and even the air traffic controllers' organization that the FAA Administrator agreed to listen to user inputs and allow general aviation flights through the Los Angeles TCA.

Recently, the FAA acted under the political whip of former Transportation Secretary Elizabeth Dole -- now resigned and working on behalf of her husband's candidacy for President -- and proposed expanding the size of TCAs and converting existing ones to a "uniform configuration" with no consideration being given to local airspace situations or peculiarities.

The proposed new "Super TCAs" would be 69 miles across. They would engulf enormous amounts of airspace, most of which is never used by passenger carrying commercial airliners at all! FAA traffic controllers would have the power to deny entry into any portion of any TCA to any aircraft, regardless of whether it was equipped with all the electronic gear demanded by the FAA regulations.

The Super TCAs will saturate an air traffic control system already operating at near-saturation. This is because the existing air traffic control system is a mish-mash of Band-Aids and "quick-fixes" applied to on top of old systems dating back to the days of the DC-3.

1987 was the safest year ever for general aviation; we're working very hard to fly safely. But it was the worst year for the air carriers. Yet it will be general aviation that's penalized if the FAA continues its present path of dictatorial control (and more of the same planned) of the airspace.

I want safe skies. I not only fly my own plane, but I also travel as a passenger on commercial airlines. As the old pilot's saying goes, "It's just your own pink bod strapped into that flying machine with nothing between you and the ground but air!" This holds true whether I'm the pilot or a paying passenger.

But we aren't going to get safe skies if we continue to make panicky quick-fixes to an old and complex system. I work hard to keep up to date on the complex airspace system. I'm sure many pilots don't understand it at all. In fact, I've discovered that many FAA air traffic controllers don't even understand it in spite of months of training and years of experience! And the regulations have grown so complex that even FAA personnel don't know their own rules!

I'm trained as an engineer. I know how to build things and how to fix things. My strong recommendation is: Instruct the FAA to stop quick fixes, listen to users, manage the airspace that now exists (however complex it may be), and work diligently with users to bring to reality the recommendations made in the National Airspace Plan (NASP).

The Hon. Wendell H. Ford
29 January 1988
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In the meantime, the air traffic control system is about as safe as it can get without starting over with a clean slate. If the FAA operated the airspace system as it is supposed to, it would be even safer. In the meantime, let's use our heads, our high technology, and the voice of experience to undertake the long-range recommendations of the NASP.

If we continue on our present course, the FAA and its bureaucratic arrogance will destroy the world's finest air transportation system, a system that includes general aviation and military aviation as well as commercial aviation. To do this, you and your colleagues in the Senate and in the House will have to reaffirm our national committment to remain an airfaring nation and the constitutional principle of a free nation which states that everything is permitted except that which is expressly prohibited...and not the other way around.

Very truly yours,

G. Harry Stine